

1. Designation of the mixtures and of the company**1.1. Product identifier:**

group 3a; trade names: Brantho-Korrux "2-Kompo", Branth's 2K-Flexi-Lack, Branth's 2K-Anti-Graffic-Lack, Branth's 2K-(M) Schutzlack, each as master lacquer component

1.2. Intended use:

paint, protective coating (base component)

1.3. Company/undertaking identification:

Branth-Chemie A.V. BRANTH * Telephone: +49 40-369740-0 * Telefax: +49 40-367148

Biedenkamp 23, D-21509 Glinde/Hamburg, Germany

e-Mail: Branth-Chemie@t-online.de

Information through: SALES /TECHNICAL SERVICE: +49 40-369740-0 (Mo.-Th. 8 a.m.-4 p.m., Fr. 8 a.m.-1 p.m.)

1.4. Emergency phone (in Germany): Giftnotrufzentrale Göttingen: +49 551-19240**2. Hazards identification (liquid product, not dry paint)**

2.1. According to GefStoffV resp. RL 1999/45/EG and 67/548/EWG: no danger symbol; R10,52/53,66,67; S2,23,38,51

2.2. Labelling according to VO 1272/2008/EG (GHS, CLP)

Hazard pictograms:



Flam. Liq 3 H226

STOT. SE 3 H336

Signal word: Attention

Hazard statements: H226 Flammable liquid and vapour. H336 May cause sleepiness or drowsiness.

Precautionary statement: P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P404 Store in a closed container. P262 Do not get in eyes, on skin, or on clothing. P271 Use only outdoors or in well-ventilated area.

P102 Keep out of reach of children.

Other hazards: EUH 066 Repeated exposure may cause skin dryness or cracking. EUH 211 Avoid breathing vapours/spray.

Hazardous respirable droplets may be formed when sprayed.

2.3. Characterization: 2-component paint, to be used with hardener

| 3. Information on ingredients 3.2. Mixtures %-share of substances classified as hazardous to health or environment | Appendix: Letter | Trade names | | | |
|--|------------------|-----------------------------------|----------------------|------------------------|-------------------------|
| | | <u>Brantho-Korrux 2-Kompo</u> | <u>2K-Flexi-Lack</u> | <u>2K-Anti-Graffic</u> | <u>2K-(M)Schutzlack</u> |
| entaron. KW; CAS 64742-48-9 | A | 2,5-10 | -- | 1-2 | -- |
| PM; CAS 107-98-2 | B | 1-2 | -- | -- | -- |
| PMA; CAS 108-65-6 | C | 2,5-10 | 2,5-10 | ca. 5 | ca. 5 |
| n-Butylacetat; CAS 123-86-4 | D | 2,5-10 | 20-25 | 25-50 | 10-20 |
| Xylol; CAS 1330-20-7 | K | -- | 1-2 | 1-2 | ca. 5 |
| KW-Gemisch; CAS 64742-95-6 | O | -- | < 2,5 | -- | 10-25 |

Continued on page 4: Detailed Information see appendix Material-Safety-Data-Sheet.
Depending on colour, 0-25% titanium dioxide (TiO₂, white pigment, food additive E171, CAS 13463-67-7) is contained.

4. First Aid measures

4.1. General: In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. **Inhalation:** Remove to fresh air, keep patient warm and at rest, if breathing is irregular or stopped, administer artificial respiration. Give nothing by mouth. If unconscious, place in recovery position and seek medical advice immediately. **Eye contact:** Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart and seek medical advice. **Skin contact:** Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognised skin cleaner. Do not use solvents or thinners. **Ingestion:** Rinse mouth with water. Let water be drunk in little sips afterwards. Obtain immediate medical attention. Keep at rest. Do not induce vomiting.

4.2. Long term: Serious long term effects are not known for the substances used in this preparation.

4.3. Please show Safety-Data-Sheet to the doctor.

5. Firefighting measures

5.1. Extinguishing media: recommended: alcohol resistant foam, CO₂, powders, water spray/mist

not suitable: water-jet

5.2. Recommendations: fire will produce dense black smoke. Inhalation of decomposition products may cause a health hazard. **Additional protection:** when fire fighting appropriate breathing apparatus is required

5.3 Advice for firefighters: sealed containers in the proximity should be cooled with plenty of water. Disposed water should not be allowed entering drains.

6. Accidental release measures

6.1. Personal protection: Refer to instructions listed in sections chapter 7 and 8

6.2. Environmental protection: Do not allow entering drains or watercourses. If the product contaminates lakes, rivers or sewages, inform appropriate authorities in accordance with local regulations.

6.3. Cleaning/disposal: Collect spillage with non-combustible absorbent materials or mechanically.

group 3a; trade names: Brantho-Korrux "2-Kompo", Branth's 2K-Flexi-Lack, Branth's 2K-Anti-Graffic-Lack, Branth's 2K-(M) Schutzlack, each as master lacquer component

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7. Handling and storage

Handling

7.1. Recommendations for safe handling: Use only in areas from where naked lights and other ignition sources have been excluded. Electrical equipment should be protected to the appropriate standard. Avoid skin and eye contact. Avoid inhalation of vapour and spray mist. Smoking, eating and drinking should be prohibited in application area. For personal protection: see section 8. Comply with the local health and safety laws at work. Do not empty using pressure.

7.2. Storage

Requirements for storerooms and containers: Store in a cool place. Keep containers closed. Smoking prohibited. No access for unauthorised persons. Containers that are opened must be resealed carefully and kept upright to prevent leakage.

Combined storage: Keep away from oxidising agents, strong alkaline and strong acid materials.

Additional storage requirements: Store in original containers. Observe label precautions. Store in cool and dry areas. Away from sources of heat and direct sunlight. Keep away from sources of ignition.

Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid concentrations higher than the occupational exposure limits.

Storage classification: 3A

8. Exposure controls / personal protection

8.1. Ingredients with occupational exposure limits: see 3.2 (page 1) and appendix (page 4)

8.2. Engineering measures: Provide adequate ventilation. Where reasonably practical this should be achieved by the use of local exhaust ventilation and good general extraction. If not sufficient, use respiratory equipment (see below).

8.2.2. Personal protection equipment

Protective and hygiene measurements: All parts of the body should be washed after contact. Smoking, eating and drinking is prohibited during working.

Respiratory protection: If exposed above the occupational exposure limits (o.e.l.) acc. 8.1 or when aerosols occur use appropriate certified respirators. Check application conditions and rules of the relevant association (rules for using respiratory equipment). During manual application outdoors (brush, roller) and single person application in large ventilated buildings the concentration is usually below the o.e.l. When spraying outdoors, respectively and single person application in a large, well ventilated building this is comparative; however, in these cases the possible risk of a fine aerosol should be considered when choosing the appropriate respirator (follow manufacturer's recommendations). An appropriate fresh air supply is required when applying these products in confined areas (vessels/tanks) or, in similar cases air-fed masks/respirators shall be used. At spray application the exposure due to aerosol depends on the spray-method; select respiratory protection according to manufacturer's recommendations and local situation. When ventilating please consider that solvent vapours are heavier than air.

Hand protection:

Wear gloves that are suitable for chemicals according EN 374. The gloves shall be certified for suitability for the exposure regarding resistance, anti-static properties etc. Please follow the recommendations of the manufacturer of the gloves. Protective gloves shall be replaced immediately when damaged or at first signs of wear and tear. Application should be planned in a way that it is not necessary to wear protective gloves during an extended period of time. Suitable materials are: Nitrile-rubber; material strength: > 0,4 mm, penetration time: > 480 minutes. At longer exposure with liquid paint or thinner a higher material strength or gloves with a barrier layer shall be used. Follow manufacturer's recommendations. Repeated or prolonged contact with the preparation causes removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin, especially when paint-stained skin is repeatedly cleaned with aggressive cleaners/solvents. If the application conditions are impeding that gloves are not worn, it is recommended to use barrier creams before and after. Barrier creams help to protect the exposed areas of skin.

Eye protection: In cases of possible splashes wear protective glasses according EN 166.

Skin protection: During normal application with brush and roller extra skin protection is not required. If, due to application conditions or method, the risk of contact cannot be avoided, electrostatic conduction (protective) clothing (cotton) can be worn. Follow manufacturer's recommendations.

8.2.3. Environmental Data: The preparations are **not** subject to "GHS09 aquatic hazard" labelling-requirements. Other data concerning particular ingredients can be seen in point 3 (page 1) and appendix (page 4).

9. Physical and chemical properties

| Trade names | BK 2-Kompo | 2K-Flexi-Lack | 2K-Anti-Graffic | 2K-(M)Schutzlack |
|--|---|--------------------------|-----------------|------------------|
| 9.1. physical state | viscous | | liquid | |
| colour | various | various or colourless | | colourless |
| Smell | aromatic | fruity | typical | |
| change in condition | thickening due to evaporation and/or addition of hardener | | | |
| Flash point (DIN 53213) | ca. 25°C | | | |
| Ignition temperature (DIN 51794) | > 240°C | | | |
| Fire supporting properties/Auto ignitic | no/no | | | |
| Explosion hazard due to | evaporation | | | |
| Explosion limits lower/higher | 0,5/11 (from literature) | 1 / 11 (from literature) | | |
| Vapour pressure at 50° C | < 110 (from literature) | | | |
| Density at 20° C (depends on colour) | ca. 1,4-1,5 | ca. 0,85 | ca. 1 | |
| Solubility in water at 20° C | insoluble (< 3) | | | |
| Viscosity at 20° C 4 mm (DIN 53211) bzw. 6 mm (ISO 2431) | ca. 120 | 140-160 | ca. 120 | ca. 60-70 |
| Solvent content (% by weight) | ca. 27 | ca. 34 | ca. 50 | ca. 53 |
| 9.2. Solvent separation test ADR/RID | < 1 % | | | |
| Solids content/ph value | ca. 73 / - | ca. 66 / - | ca. 50 / - | ca. 47 / - |

group 3a; trade names: Brantho-Korrux "2-Kompo", Branth's 2K-Flexi-Lack, Branth's 2K-Anti-Graffic-Lack, Branth's 2K-(M) Schutzlack, each as master lacquer component

Branth-Chemie A.V. Branth - Biedenkamp 23 * D-21509 Glinde/Hamburg, Germany

10. Stability and reactivity

10.1. Reactivity: see chapter 10.5.

10.2. Chemical stability: No hazardous reaction when handled and stored according to provisions.

10.3. Possibility of hazardous reactions: see chapter 10.2. and 10.5.

10.4. Conditions to avoid: see chapter 10.5.

10.5. Incompatible materials: Keep away from oxidising agents, strong alkaline and strong acid materials in order to avoid exothermic reactions.

10.6. Hazardous decomposing products: exposure to high temperatures may cause hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

11. Toxicological information: see chapter 3. (page 1) and appendix (page 4)

11.1. see chapter 2 for the mixture; see chapter 3 and appendix for composition of substances

11.2. General: There are no data available on the preparation itself; however the preparation is assessed according conventional method of the Dangerous Preparations Directive 1999/45/EC and classified for toxicological hazards accordingly. Please refer to chapter 3., 8. and 15. Liquid splashed in the eyes may cause irritation and reversible damage. Generally the combination of solvent vapours and alcohol consumption is considered health endangering. Exposure to solvent vapours above the stated o.e.l. may lead to adverse health effects such as: irritation of the mucous membranes and respiratory organs, headache, dizziness, fatigue and adverse effects to the kidneys and liver, central nervous system and, in extreme cases, loss of consciousness. **The preparations contain:** binders/resins (natural and synthetic-modified), organic and/or inorganic pigments (e.g. titanium dioxide, talcum, iron oxide) solvents (see 3.2.) were applicable, lead-, zinc- and chromate free additives (<0,5%). Substances may cause allergic reactions. When covering large areas with solvent containing coatings anti-corrosive pigments, in confined spaces (buildings) it is recommended to properly ventilate during and after application. Also during the following days regular ventilation is recommended.

12. Ecological information

12.1.-12.6. see chapter 3 and appendix for composition of substances

12.7. There are no data available on the preparation itself. The product is not allowed to enter drains or watercourses.

13. Disposal considerations

13.1.1. Product: Waste material should be disposed of (see local directions).

Note regulations of law, waste identification number: 080111 or 080112.

For all products listed here, completely dried waste paint (including brushes, rollers, filler mats etc.) are no hazardous waste.

13.1.2. Containers: Empty containers entirely with a brush, do not wash. Fully emptied, dry containers can easily be recycled. Containers not properly emptied are special waste (waste identification number: 150110).

13.1.3. Do not dispose of in wastewater.

13.1.4. Product should be used completely. Original-closed cans can be returned within the tenability date on the cans.

14. Transport information

14.1 UN number: 1263; **14.2.** UN proper shipping name: paint; **14.3.** Transport hazard class: 3;

14.4. Packing group III; **14.5.** not subject to hazardous classification, no marine pollutant;

14.6. Special precautions for user; not known; **14.7.** no transport in bulk.

Additional transport information:

land transport in accordance with ADR/RID and GGVS/GGVE: viscous product in packaging up to 450 ltr.;

not subject to hazardous classification

transport by sea in accordance with IMDG/GGVSea: viscous product in registered packaging up to 30 ltr.; not subject to hazardous classification; IMO-statement required: "LQ" (limited quantity); no marine pollutant

transport by air in accordance with ICAO-TI und IATA-DGR:

EMG-Nr./MFAG-Nr.: F-E, S-E, 5 ltr cans "UN1A1Y...", no air-transport organised through manufacturer

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

| | | | | |
|------------------------|---------------------|------------|------------|---------------------------------|
| Trade name | 0 / 9 / 18 | 0 / 6 / 28 | 0 / 4 / 46 | 0 / 10 / 43 |
| Water polluting danger | 1 = small potential | | | 2 = clearly water contaminating |
| VbF-label/class | no/no | | | |
| VOC-value (g/l) | ca. 390 | ca. 290 | ca. 500 | ca. 530 |
| Product code by GISBAU | PU 20 (BS 40) | | PU 20 | |

15.2. No Chemical Safety Assessment has been carried out for this mixture.

16. Other information

I. Indication of changes: MSDS-changes that represent a worsening/deterioration due to a change in our product composition are highlighted by vertical marks in the margin. Changes due to (once again) changed laws and regulations, editorial changes or facilitations/improvements are not marked.

II. Abbreviations and acronyms: You can require a list of all used abbreviations and acronyms separately in German language.

III. Important final informations: The information of this MSDS is based on the present state of our knowledge and on current EEC laws. Users working conditions are beyond our knowledge and control. The product is developed to meet the highest environmental standards, it should not to be used for other purposes than those specified under chapter one. It is always the responsibility of the user to take all necessary steps in order to fulfil the demands laid down in the local rules and legislation. The information herein is meant as a description of the safety requirements of our product: it is not to be considered as a guarantee of the products properties. The appendix is part of the MSDS.

1. Designation of the mixtures and of the company**1.1. Produktidentifizier:**

group 3b; trade names: Hardener-component N for Brantho-Korrux "2-Kompo", Branth's 2K-Flexi-Lack, Branth's 2K-Anti-Graffic-Lack, Branth's 2K-(M) Schutzlack, "3in1" hardener, Quick hardener, accelerator (for Brantho-Korrux 2-Kompo)

1.2. Intended use:

drying accelerator, hardener component

1.3. Company/undertaking identification

Branth-Chemie A.V. BRANTH * Telephone: 040-369740-0 * Telefax: 040-367148

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e-Mail: Branth-Chemie@t-online.de

Information through SALES/TECHNICAL SERVICE: +49 40-369740-0 (Mo.-Thu. 8⁰⁰-16⁰⁰, Fr. 8⁰⁰-13⁰⁰)

1.4. Emergency phone (in Germany): Giftnotrufzentrale Göttingen: +49-551-19240)**2. Hazards identification (liquid product, not dry paint)**

2.1. According to GefStoffV resp. RL 1999/45/EG und 67/548/EWG: Xi,P91; R10,43,52/53,66,67; S2,23,38,51

2.2. Labelling according to VO 1272/2008/EG (GHS, CLP)

Hazard pictograms:

Product identifier: aliphatic polyisocyanates

(Polymere) CAS 53880-05-0 resp. CAS 28182-81-2



Signalword: Attention

Flam. Liq 3 H226

STOT. SE 3 H335,H336

Acute Tox. 4 H332, EUH066, EUH204

(H335,H332,EUH204 not valid for accelerator)

Hazard indication: H226 Flammable liquid and vapour. H336 May cause sleepiness or drowsiness.

Safety recommendations: P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P 404 Store in a closed container. P261 Avoid breathing vapours/spray. P271 Use only outdoors or in well-ventilated area.

P102 Keep out of reach of children.

Other hazards: EUH 066 Repeated exposure may cause skin dryness or cracking. Do not get in eyes, on skin, or on clothing. EUH 204 Contains isocyanates. May produce an allergic reaction.

2.3. Characterization: binder-/ solvent-mixture, flammable; hardener, application with master laquer component

3. Information on ingredients**3.2. Mixtures**

%-share of substances classified as hazardous to health or environment

| | Appendix: Letter | Trade names | | | |
|---|------------------|--------------|-----------------|----------|--|
| | | Quick-Härter | "3in1" - Härter | Härter N | Accelerator for Brantho-Korrux 2-Kompo |
| PM; CAS 107-98-2 | B | -- | 20-25 | -- | -- |
| PMA; CAS 108-65-6 | C | < 5 | < 5 | -- | -- |
| n-Butylacetat; CAS 123-86-4 | D | 50-70 | 30-50 | 20-25 | > 20 |
| Xylol; CAS 1330-20-7 | K | < 5 | < 5 | -- | -- |
| KW-Gemisch; CAS 64742-95-6 | O | -- | 15-20 | -- | -- |
| Isocyanat; CAS 4098-17-9 | S | < 0,1 | < 0,1 | -- | -- |
| Isocyanat; CAS 822-06-0 | L | -- | -- | < 0,4 | -- |
| Polymer; CAS 53880-05-0 | T | 20-25 | 10-15 | -- | -- |
| Polymer; CAS 28182-81-2 | M | -- | -- | 50-75 | -- |
| Diocetylzinnndineodecanoat;CAS 68299-15-0 | U | -- | -- | -- | < 10 |

continued on page 4: Detailed information see appendix Material-Safety-Data-Sheet.

4. First Aid measures

4.1. General: In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. **Inhalation:** Remove to fresh air, keep patient warm and at rest, if breathing is irregular or stopped, administer artificial respiration. Give nothing by mouth. If unconscious, place in recovery position and seek medical advice immediately. **Eye contact:** Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart and seek medical advice. **Skin contact:** Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognised skin cleaner. Do not use solvents or thinners. **Ingestion:** Rinse mouth with water. Let water be drunken in little sips afterwards. Obtain immediate medical attention. Keep at rest. Do not induce vomiting.

4.2. Long term: Serious long term effects are not known for the substances used in this preparation.

4.3. Please show Safety-Data-Sheet to the doctor.

5. Firefighting measures

5.1. Extinguishing media: recommended: alcohol resistant foam, CO₂, powders, water spray/mist

not suitable: water-jet

5.2. Recommendations: fire will produce dense black smoke. Inhalation of decomposition products may cause a health hazard. **Additional protection:** when fire fighting appropriate breathing apparatus is required

5.3 Advice for firefighters: sealed containers in the proximity should be cooled with plenty of water. Disposed water should not be allowed entering drains.

6. Accidental release measures

6.1. Personal protection: Refer to instructions listed in sections chapter 7 and 8

6.2. Environmental protection: Do not allow entering drains or watercourses. If the product contaminates lakes, rivers or sewages, inform appropriate authorities in accordance with local regulations.

6.3. Cleaning/disposal: Collect spillage with non-combustible absorbent materials or mechanically.

group 3b; trade names: Hardener-component N for Brantho-Korrux "2-Kompo", Branth's 2K-Flexi-Lack, Branth's 2K-Anti-Graffic-Lack, Branth's 2K-(M) Schutzlack, "3in1" hardener, Quick hardener, accelerator (for Brantho-Korrux 2-Kompo)

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7. Handling and storage

Handling

7.1. Recommendations for safe handling: Use only in areas from where naked lights and other ignition sources have been excluded. Electrical equipment should be protected to the appropriate standard. Avoid skin and eye contact. Avoid inhalation of vapour and spray mist. Smoking, eating and drinking should be prohibited in application area. For personal protection: see section 8. Comply with the local health and safety laws at work. Do not empty using pressure.

7.2. Storage

Requirements for storerooms and containers: Store in a cool place. Keep containers closed. Smoking prohibited. No access for unauthorised persons. Containers that are opened must be resealed carefully and kept upright

to prevent leakage. **Combined storage:** Keep away from oxidising agents, strong alkaline and strong acid materials.

Additional storage requirements: Store in original containers. Observe label precautions. Store in well-ventilated, cool and dry, areas; away from sources of heat and direct sunlight. Keep away from sources of ignition.

Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid concentrations higher than the occupational exposure limits.

Storage classification: 3A

8. Exposure controls / personal protection

8.1. Ingredients with occupational exposure limits: see 3.2 (page 1) and appendix (page 4)

8.2. Engineering measures: Provide adequate ventilation. Where reasonably practical this should be achieved by the use of local exhaust ventilation and good general extraction.

8.2.2. Personal protection equipment

Protective and hygiene measurements: All parts of the body should be washed after contact. Smoking, eating and drinking is prohibited during working.

Respiratory protection: When workers are exposed over the occupational exposure limits (o.e.l.) acc. 8.1 or when aerosols might occur they must use appropriate certified respirators. Please check application conditions and rules of the relevant association (rules for using respiratory equipment). During manual application outdoors (brush, roller) and single person application in a large, well ventilated building the concentration is usually below the o.e.l. When spraying outdoors, respectively and single person application in a large, well ventilated building this is comparative; however, in these cases the possible risk of a fine aerosol should be considered when choosing the appropriate respirator (follow manufacturer's recommendations). An appropriate fresh air supply is required when applying these products in confined areas (vessels/tanks) or, in similar cases air-fed masks/respirators shall be used. At spray application the exposure due to aerosol depends on the spray-method; examples in a diminishing sequence: HVLP-spray, electrostatic spray, airless spray, air-atomised (conventional) spray. Respiratory protection must be selected from the manufacturer's recommendations and local situation. When ventilating please consider that solvent vapours are heavier than air.

Hand protection: Wear gloves that are suitable for chemicals according EN374. The gloves shall be certified for suitability for the exposure regarding resistance, anti-static properties etc. Please follow the recommendations of the manufacturer of the gloves. Protective gloves shall be replaced immediately when damaged or at first signs of wear and tear. Application should be planned in a way that it is not necessary to wear protective gloves during an extended period of time. Suitable materials are: Nitrile-rubber; material strength: > 0,4 mm, penetration time: > 480 minutes. At longer exposure with liquid paint or thinner higher a material strength or gloves with a barrier layer shall be used. Follow manufacturer's recommendations. Repeated or prolonged contact with the preparation causes removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin, especially when paint-stained skin is repeatedly cleaned with aggressive cleaners/solvents. If the application conditions are impeding that gloves are not worn, it is recommended to use barrier creams before and after. Barrier cremes help to protect the exposed areas of skin.

Eye protection: In cases of possible splashes wear protective glasses according EN 166.

Skin protection: During normal application with brush and roller extra skin protection is not required. If, due to application conditions or method, the risk of contact cannot be avoided, electrostatic conduction (protective) clothing (cotton) can be worn. Follow manufacturer's recommendations.

8.2.3. Environmental Data: The preparations are **not** subject to "environmental hazardous-N" labelling-requirements.

9. Physical and chemical properties

| Trade names | Quik-Härter | 3in1 Härter | Härter N | accelerator |
|--|--|----------------|-----------------|-------------|
| 9.1. Physical state | liquid | | | |
| Colour | colorless | milky | colorless | colorless |
| Smell | aromatic | | | |
| Change in condition | thickening due to evaporation in opened cans | | | |
| Flash point (DIN 53213) | ca. 25°C | ca. 24°C | ca. 35°C | ca. 25°C |
| Ignition temperature (DIN 51794) | > 200° C | > 240°C | > 400°C | ca. 360°C |
| Fire supporting properties / auto ignition | no/no | | | |
| Explosion hazard due to | solvent evaporation | | | |
| Explosion limits lower/higher | 1/11 | 1/14 | 1,2/7,5 | |
| Vapour pressure at 20°C | 5-15 h Pa | | < 110 | |
| Density at 20°C (depends on colour) | ca. 0,92 | | ca. 1 | ca. 0,9 |
| Solubility in water at 20°C | < 3 | partly soluble | insoluble (< 3) | |
| Viscosity at 20°C (DIN 53211/4mm); | ca. 20 | < 60 | ca. 40 | < 20 |
| Viscosity at 20°C (DIN ISO 2431/6mm) | -- | -- | -- | -- |
| Solvent content (% by weight) | ca. 78 | ca. 77 | ca. 25 | > 90 |
| 9.2. Solvent separation test (ADR/RID) | < 1 % | | | |
| Solids content/ph value | ca. 22/- | ca. 23/- | ca. 75/- | < 10/- |

group 3b; trade names: Hardener-component N for Brantho-Korrux "2-Kompo", Branth's 2K-Flexi-Lack, Branth's 2K-Anti-Graffic-Lack, Branth's 2K-(M) Schutzlack, "3in1" hardener, Quick hardener, accelerator (for Brantho-Korrux 2-Kompo)

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10. Stability and reactivity

10.1. Reactivity: see chapter 10.5.

10.2. Chemical stability: No hazardous reaction when handled and stored according to provisions.

10.3. Possibility of hazardous reactions: see chapter 10.2. and 10.5.

10.4. Conditions to avoid: see chapter 10.5.

10.5. Incompatible materials: Keep away from oxidising agents, strong alkaline and strong acid materials in order to avoid exothermic reactions.

10.6. Hazardous decomposing products: exposure to high temperatures may cause hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

11. Toxicological information: see chapter 3. (page 1) and appendix (page 4)

11.1. see chapter 2 for the mixture; see chapter 3 and appendix for composition of substances

11.2. Other information: There are no data available on the preparation itself.

Liquid splashed in the eyes may cause irritation and reversible damage. Generally the combination of solvent and alcohol consumption is considered health endangering. Inhalation of solvent vapours above the sated o.e.l. may lead to adverse health effects such as: irritation of the mucous membranes and respiratory organs, headache, dizziness, fatigue. Going beyond: adverse effects to the kidneys and liver, central nervous system and drowsiness.

The preparations contain: binders/resins (natural and sythetic-modified), organic and/or inorganic pigments (e.g. titanium dioxide, talcum, iron oxide) aromatic-free solvents, lead-, zinc- and chromate free anti corrosive pigments, additives (<1%). Substances may cause allergic reactions.

When covering large areas with solvent containing coatings in confined spaces (buildings) it is recommended to properly ventilate during and after application. Also during the following days regular ventilation is recommended.

12. Ecological information

12.1.-12.6. see chapter 3 and appendix for composition of substances

12.7. There are no data available on the preparation itself. The product should not be allowed to enter drains or watercourses.

13. Disposal considerations

13.1.1. Product: Not cured remainders of paint, if they need to be disposed, should be treated as chemical waste.

Note regulations of law, waste identification number: 080111 or 080112.

For all products listed here, completely dried waste paint (including brushes, rollers, filler mats etc.) are no hazardous waste.

13.1.2. Containers: Empty containers entirely with a brush, do not wash. Fully emptied, dry containers can easily be recycled. Containers not properly emptied are special waste (waste identification number: 150110).

13.1.3. Do not dispose of in wastewater.

13.1.4. Product should be used completely. Original-closed cans can be returned within the tenability date on the cans.

14. Transport information

Within factory site: in closed, upright, secured containers. **Avoid emissions.**

14.1 UN number: 1263; **14.2.** UN proper shipping name: paint; **14.3.** Transport hazard class: 3;

14.4. Packing group III; **14.5.** not subject to hazardous classification, no marine pollutant;

14.6. Special precautions for user; not known; **14.7.** no transport in bulk.

Additional transport information:

land transport in accordance with ADR/RID and GGVS/GGVE: not subject to hazardous classification, standard can with outer carton packing; limited quantity (LQ), no registration necessary for documents of transportation

transport by sea in accordance with IMDG/GGVSea: not subject to hazardous classification, no marine pollutant, limited quantity (LQ), IMO-declaraion necessary with "LQ".

transport by air in accordance with ICAO-TI und IATA-DGR:

EMG-Nr./MFAG-Nr.: F-E, S-E, 5 ltr cans "UN1A1Y...", no air-transport organised through manufacturer

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

| trade name | Quick-Härter | 3in1 - Härter | Härter N | accelerator |
|--|--|---------------|------------|-------------|
| TA-air (weight %): Kl. I / II / III | 0 / 9 / 69 | 0 / 6 / 71 | 0 / 0 / 25 | 0 / 0 / 100 |
| water polluting danger | 2 | | 1 | |
| water polluting danger classification: | 1 = small potencial, 2 = clearly water contaminating | | | |
| VbF-label/class | A II | | | |
| VOC-value (g/l) | < 700 | < 680 | ca. 250 | < 900 |
| Productcode by GISBAU | without | | -- | without |

15.2. No Chemical Safety Assessment has been carried out for this mixture.

16. Other information

I. Indication of changes: MSDS-changes that respresent an aggravation due to a change in our product composition are highlighted by vertical marks in the margin. Changes due to (once again) changed laws and regulations, editorial changes or facilitations/improvements are not marked.

II. Abbreviations and acronyms: You can require a list of all used abbreviations and acronyms separately in German language.

III. Important final informations: The information of this MSDS is based on the present state of our knowledge and on current EEC laws. Users working conditions are beyond our knowledge and control. It is always the responsibility of the user to take all necessary steps in order to fulfil the demands laid down in the local rules and legislation. The information herein is meant as a description of the safety requirements of our product: it is not to be considered as a guarantee of the products properties. The appendix ist part of the MSDS.

Appendix, Substance from the Safety-Data-Sheet chapters 3., 8., 11. und 12.

EU 1907/2006 Material Safety-Data-Sheet Branth's 2K-paints/coatings

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appendix 1/2 (page 4)

tentative translation

group 3a+3b; trade names: Brantho-Korrux "2-Kompo", Branth's 2K-Flexi-Lack, Branth's 2K-Anti-Graffic-Lack, Branth's 2K-(M) Schutzlack (paint- and hardener components), "3in1-Härter", Quick-Härter, Beschleuniger (for Brantho-Korrux 2-Kompo)

Branth-Chemie A.V. Branth - Biedenkamp 23 * D-21509 Glinde/Hamburg - Postfach 1107 * 21503 Glinde/Hamburg

- A entarom. KW; CAS 64742-48-9;** aromate free hydrocarbons, Naphtha (petroleum, hydrotreated, heavy); EG 265-150-3; EINECS 265-150-3; INDEX 649-327-00-6; Reg.-No. 012119463258; **Xn; R10, 65, 66, 67;** S2, 23, 38, 51; **H226, 304, 336;** benzene-content<0,1%; AGW (TRGS 900) 300 mg/m³
Ingestion: LD 50 rat > 2000 mg/kg; Skinabsorption: LD 50 rat > 2000 mg/kg; Inhalation: LD 50 rat > nearly saturated vapour concentration, 4 h;
Ecology: LC50 fish > 1000 mg/l; LC50 invertebrate < 1000 mg/l; LC50 algae > 1000 mg/l; LC50 microorganisms <= 10;
Readily biodegradable; WGK 1.
- B PM; CAS 107-98-2;** 1-Methoxy-2-propanol; EG 203-539-1; EINECS 203-539-1; INDEX 603-064-00-3; Reg.-No. 012119457435; **R10, 67;** S2, 23, 24, 38; **H226, 336**
AGW (TRGS 900) 370 mg/m³ 100 ppm sharp limit 2; IOELV (EU): TWA 375 mg/m³ 100 ppm; STEL 568 mg/m³ 150 ppm;
Ingestion: LD 50 rat 7.200 mg/kg; Inhalation: LC 50 rat 54,6 mg/l 4 h; Skinabsorption: LD 50 rabbit 14.000 mg/kg;
Readily biodegradable: (90 %, 28 d, OE CD 301 E); Fish toxicity: LCO Leuciscus idus melanotus > 4.600 mg/l 96 h; WGK 1
- C PMA; CAS 108-65-6;** 2-Methoxy-1-methylethylacetate; EG 203-603-9, INDEX 607-195-00-7; Reg.-No. 012119475791-29; **R10, H226**
AGW (TRGS 900) 270 mg/m³, sharp limit 1; IOELV (EU): TWA 275 mg/m³; STEL 550 mg/m³
Ingestion: LD 50 rat 8.532 mg/kg; Inhalation: LCO rat 23,8 mg/l 6 h; skinabsorption: LD 50 rat > 5.000 mg/kg;
Skin contact: no irritation; eye contact: irritated the eyes; not sensitizing (guinea pig, maximization test)
Readily biodegradable: 100 % 8 d (dental wellens test EG 88/302); Fish toxicity: LC 50 Quacorhynchus mykiss 100-180 mg/l 96 h OECD TG 203;
Daphnia toxicity: EC 50 Daphnia magna > 500 mg/l 48 h (RL 67/548/EWG Anh. V. C2);
Bacterial toxicity: activated sludge > 1.000 mg/l 0,5 h, WGK 1
- D n-Butylacetate; CAS 123-86-4;** EG 204-658-1; EINECS 204-658-1; INDEX 607-025-00-1; Reg.-No. 012119485493-29; **R10, 66, 67;** S2, 24, 25, 38, 51; **H226, 336;** AGW (TRGS 900) 480 mg/m³ 100 ppm;
Ingestion: LD 50 rat 13.100 mg/kg; Inhalation: LC 50 rat > 21 mg/l 4 h; Skinabsorption: LD 50 rabbit > 17.600 mg/kg;
Readily biodegradable: 98 % 28 d (OECD 301 D); Fish toxicity: LC 50 Leuciscus idus melanotus 62 mg/l 96 h (DIN 38412);
Daphnia toxicity: EC 50 Daphnia magna 72,8 mg/l 24 h (DIN 38412); WGK 1
- H Butanone Oxim; CAS 96-29-7;** Methylethylketoxim; EINECS 202-496-6; INDEX 616-014-00-0; Reg.-no. 012119539477-28;
AGW 1 mg/m³ (TRGS 900 vom 19.9.2013), Category I, Exceedance Factor 8;
Acute Tox.4 **H312;** Skin Sens.1 **H317;** Eye Dam.1 **H318,** Carc.Cat.2 **H351** pregnancy group Y (no risk of foetal damage),
skin sensitization (Sh) and skin resorption (H) experimentally proven. Ingestion: LD 50 rat 3,68 g/kg; Inhalation: LC 50 rat > 4,8 mg/l 4 h;
skin absorption:LD50 rabbit 0,92 g/kg; biodegradable (diluted):88 % 28 d; fish toxicity:LC50 Pimpephales promelas > 10.000 mg/l 24 h;WGK 1
- I Xylol; CAS 1330-20-7;** Xylene isomers mixture (Xylene, Ethylbenzol); EG 215-535-7; INDEX 601-022-00-9; Reg.-Nr. 012119488216-32;
Xn; R10, 20/21, 38; H226, 312, 332, 315, 319, 304, 335, 373; AGW (TRGS 900) 440 mg/m³; H, DFG;
Ingestion: LD 50 rat 4300 mg/kg; Skinabsorption: LD 50 rabbit > 2000 mg/kg; Inhalation: LC 50 rat 29 mg/l, 4 h,
Irritating to skin and mucous membranes; Ecology: LC 50 fish 86 mg/l, 96 h; LC 50 alga 1-10 mg/l, 72 h; EG 50 water flea 165 mg/L, 24 h;
EG 50 bacteria 1-10 mg/l; readily biodegradable; bioaccumulation log Pow: 3,12-3,20; WGK 2
- L Isocyanat; CAS 822-06-0;** Hexamethylen-1,6-diisocyanat; Aliphatisches Polyisocyanat; EINECS 212-4985-8; INDEX 615-011-00-1;
T, Xi; R23, 36/37/38, 42/43; H302, 330, 315, 319, 334, 317, 335 (spec. border concentration GHS **H334, 317** > 0,5%);
Classification spec. border concentration: Xn, R20, 42/43 (0,5 - < 2 %), AGW (TRGS 900) 0,035 mg/m³, sharp limit 2;
Ingestion: LD 50 rat 746 mg/kg; Skinresorption: LD 50 rabbit 593 mg/kg; Inhalation: LC 50 rat 0,124 mg/m³, 4 h;
Primary skin irritation: rabbit: highly irritating; Primary mucous membrane irritation rabbit: highly irritating; Sensitization to
Magnusson/Kligman guinea pig: positive; CMR-classification: Not mutagenic at AMES-test;
Ecology: LC 50 fish > 82,8 mg/l, 96 h; EC 50 water flea > 89,1 mg/l, 48 h; EC 50 bacteria (activated sludge) 842 mg/l, 3 h;
EG 50 algae > 77,4 mg/l, 72 h; not readily biodegradable; WGK 1
- M Polymer; CAS 28182-81-2;** Hexamethylen-1,6-diisocyanat (homopolymer); Aliphatisches Polyisocyanat (homopolymer);
Xn, R20, 37, 43; H317, 332, 335; Reach = Polymere
Ingestion: LD 50 rat > 5000 mg/kg; Inhalation: LC 50 rat male 543 mg/m³, 4 h; LC 50 rat female 390 mg/m³, 4 h;
Primary skin irritation rabbit: weak irritating; Primary mucous membrane irritation rabbit: weak irritating; Sensitisation to
Magnusson/Kligman guinea pig: positive; CMR-classification: Not mutagenic at AMES-test;
Ecology: LC 50 fish > 100 mg/l, 96 h; EC 50 water flae > 100 mg/l, 48 h; EC 50 bacteria (activated sludge) > 1000 mg/l, 3 h;
EC 50 algae > 1000 mg/l, 72 h; not readily biodegradable; WGK 1
- N TiO2; CAS 13463-67-7;** Pigment white Titanium dioxide; EG-Nr. 236-675-5; Reg.-Nr. 01-2119489379-17-xxxx. Carc. 2 **H351** (Inhalation);
non-flammable, no hazardous to water; no dangerous goods acc. ADR;
LC 50 > 1000 mg/l; NOEC > 10.000 mg/kg; no skin irritation, no sensitizing effect on skin/inhalation; no strong eye irritation /- damage, but
possible irritation through mechanical impact (dust); DNEL values 10 mg/m³; permitted for food (E171), cosmetics, pharmaceuticals, toys.
- O KW-Gemisch; CAS 64742-95-6;** hydrocarbon mixture (aromatic slight); Solvent Naphta (petroleum, aromatic slight); EINECS 265-199-0,
INDEX 649-356-00-4; Reg.-Nr. 01-2119455851-35; **Xn, N; R10, 37, 65, 66, 67, 51/53; H226, 411, 335, 336, 304;** AGW (TRGS 900) 100 mg/m³;
Ingestion: LD 50 rat > 2000 mg/kg; Skinabsorption: LD 50 rat 2000 mg/kg; Inhalation: LC 50 rat > nearly saturated vapour concentration, 4 h;
Ecology: LC 50 fish 1-10 mg/l; LC 50 invertebrate 1-10 mg/l, LC 50 algae 1-10 mg/l; readily biodegradable; bioaccumulation potentially possible; WGK 2
- S Isocyanate; CAS 4098-71-9;** Isophorondiisocyanate; EINECS 223-861-6; INDEX 615-008-00-5; **T, Xi, N; R23, 36/37/38, 42/43, 51/53;**
spez. border concentration: Xn, R20, 42/43; **H330, 315, 319, 334, 317, 335, 411** (spez.border concentration GHS: **H334, 317** > 0,5 %);
AGW (TRGS 900) 0,046 mg/m³, sharp limit 2; toxicology/ecology: toxicological und ecological studies not existant; WGK 2
- T Polymere; CAS 53880-05-0;** Isophorondiisocyanat (homopolymere); Aliphatic Polyisocyanat (homopolymere);
Xi, R37, 43; Reach = Polymere **H317, 335;** Ingestion: LD 50 Ratte > 2000 mg/kg; Inhalation: LC 50 Ratte > 5 mg/m³;
Primary skin irritation rabbit: not irritating; Primary muscous membran irritation rabbit: weak irritation; Sensitization to Magnusson/Kligman;
guinea pig: positiv; CMR-classification. Not mutagenic;
Ecology: EC 50 water flae > 3,36 g/l, 24 h; EC 50 algae > 3,1 mg/l, 72 h; not biodegradable; WGK 2
- U Diocetylzinndineodecanoat; CAS 68299-15-0;** EG-Nr. 269-595-4; **Xn, R68/2; H371;**
Toxicology: skin, no irritaiton; eye, no irritaiton; no sensitization known; oral, can damage the immune system;
Ecology: harmful to aquatic organism; WGK 2; AGW (TRGS 900) omitted.

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appendix 1/2 (page 5)

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Explanation; P-,R- and S-phrases:

Xi = irritant; Xn = injurious to health; N = environmental hazardous; T = toxic. - P91 contains isocyanate - instructions by the manufacturer.

R10 flammable; R 20 Harmful by inhalation ; R20/21 Harmful bei inhalation and in contact with skin ; R23 Toxic by inhalation;

R36/37/38 Irritating to eyes, respiratory system and skin; R37 Irritating to respiratory system; R38 Irritates the skin; R42/43 May cause sensitization

ba inhalation and skin contact; R43 May cause sensitisation by skin contact; R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment; R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment ; R65 Harmful: may cause lung damage if swallowed; **R66 Repeated exposure may cause skin dryness or cracking**; R67 Vapours may cause drowsiness and dizziness;

R68/20 Harmful: possible risk of irreversible effects through inhalation; S2 Keep out of the reach of children;

S23 Do not inhale vapor/spray; S24 Avoid contact with skin; S25 Avoid contact with eyes; S38 In case of insufficient ventilation,

wear suitable respiratory equipment; S51 Use only in well-ventilated areas. **H226 Flammable liquid and vapour**; H302 Harmful if swallowed;

H304 May be fatal if swallowed and enters airways; H312 Harmful in contact with skin; H315 Causes skin irritation; H317 May cause an allergic skin reaction;

H319 Causes serious eye irritation; H330 Fatal if inhaled; H332 Harmful if inhaled; H334 May cause allergy or asthma symptoms of breathing difficulties if inhaled;

H335 May cause respiratory irritation; **H336 May cause drowsiness or dizziness**; H371 May cause damage to organs (or state all organs affected, if known)

(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard); H373 May cause damage to organs through prolonged or repeated exposure; H411 Toxic to aquatic life with long lasting effects;

EUH066 Repeated exposure may cause skin dryness or cracking; EUH204 Contains isocyanates. May produce an allergic reaction.