

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

group 3c; trade names: Brantho-Korrux 2K-Durasolid as master lacquer component

1.2. Intended use:

paint, protective coating (base component), use only with hardener

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.** not applicable**2.2. Labelling according to VO 1272/2008/EG (GHS, CLP)**Hazard pictograms:

Skin Irrit. 2, H315
Skin Sens. 1, H317
Eye Irrit. 2, H319
Aqua Chronic 2, H411

Signal word: Attention

Hazard statements: H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H411 toxic to aquatic life with long lasting effects.

Precautionary statement: P102 Keep out of reach of children. P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P404 Store in a closed container. P271 Use only outdoors or in well-ventilated area.

P302 If on skin: Remove contaminated clothes from skin. Wash with plenty of water. P305 if in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Other hazards: EUH205 Contains epoxy constituents. May produce an allergic reaction.

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

3. Information on ingredients		Trade names
3.2. Mixtures %-share of substances classified as hazardous to health or environment	Appendix: letter	
		<u>2K-Durasolid (base component)</u>
Isobutanol; CAS 78-83-1	V	1-2
Xylol; CAS 1330-20-7	I	1-2
Epoxy resin; CAS 1675-54-3	P	25-50

Continued on page 4: Detailed Information see appendix Material-Safety-Data-Sheet.

Depending on colour, 0-25% titanium dioxide (TiO₂, white pigment, permitted for food contact, 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.

Inhalation: Remove to fresh air, keep patient warm and at rest, if breathing is irregular or stopped, administer artificial respiration. 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.

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 3c; trade names: Brantho-Korrux 2K-Durasolid as master lacquer component

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

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. Avoid skin and eye contact. Avoid inhalation of vapour and spray mist.

Smoking, eating and drinking should be prohibited in application area. Do not leave containers open.

For personal protection: see section 8. Comply with the local health and safety laws at work.

7.2. Storage

Requirements for storerooms and containers: Store in a cool place. Keep containers closed. Do not empty using pressure.

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 (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 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 subject to "dangerous for the environment-N" labelling-requirements. This does not apply to the cured coating material. Other data concerning particular ingredients can be seen in point 3 (page 1) and appendix (page 4).

9. Physical and chemical properties

Trade names	2K-Durasolid (Stammlack)
9.1. physical state	liquid
colour	various
Smell	aromatic
change in condition	thickening due to evaporation and/or addition of hardener
Flash point (DIN 53213)	> 75° C
Ignition temperature (DIN 51794)	> 240° C
Fire supporting properties/Auto ignition	no/no
Explosion hazard due to	evaporation
Explosion limits lower/higher	-/-
Vapour pressure at 50° C	< 110
Density at 20° C (depends on colour)	1,6-1,7
Solubility in water at 20° C	< 1 %
Viscosity at 20° C 4 mm (DIN 53211)	thixotrope
Solvent content (% by weight)	< 3
9.2. Solvent separation test ADR/RID	< 1 %
Solids content/ph value	>97/-

group 3c; trade names: Brantho-Korrux 2K-Durasolid 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 in considered health endangering.

The preparations contain: binders/resins (natural and sythetic-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 (<1%). Substances, especially epoxy resins, 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.

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: 3082; **14.2.** UN proper shipping name: environmentally hazardous substances, liquid;

14.3. Transport hazard class: 9;

14.4. Packing group III; **14.5.** dangerous for the environment, 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 5 ltr. in packaging board: composite packaging, no record in the transport document, limited quantity

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

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

dangerous goods, 5 ltr cans with transport approval "UN1A2Y..." (EMG-Nr./MFAG-Nr.: F-E, S-E), no air-transport organised through manufacturer.

15. Regulatory information

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

TA-Luft (Gew. %): Kl. I / II / III	0 / < 2 / < 2
Water polluting danger	2 = clearly water contaminating
VbF-label/class	no/no
VOC-value (g/l)	ca. 35
Product code by GISBAU	RE2 (BS40, M-GP03)

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 ist part of the MSDS.

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

group 3d; trade names: Hardener-component (Hardener Z34) for Brantho-Korrux 2K-Durasolid

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

Postfach 1107, D-21503 Glinde/Hamburg * Biedenkamp 23, D-21509 Glinde/Hamburg

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)****2.2. Labelling according to VO 1272/2008/EG (GHS, CLP)**Hazard pictograms:

Flam. Liq. 3 H226
Acute Tox. 4 H302,312
Skin Sens. 1 H317
Eye Dam. 1 H318
STOT SE 3 H335,336
STOT RE 2 H373
Aqua. Chronic 3 H412

Signalword: Attention

Hazard indication: H226 Flammable liquid and vapour. H302 Harmful if swallowed.

H312 Harmful in contact with skin. H317 May cause an allergic skin reaction. H318 Causes serious eye damage.

H335 May cause respiratory irritation. H336 May cause sleepiness or drowsiness. H373 May cause damage to organs through prolonged or repeated exposure. H412 Harmful to aquatic life with long lasting effects.

Safety recommendations: P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P261 Avoid breathing vapours/spray. P271 Use only outdoors or in well-ventilated area.

P302 IF ON SKIN: P361 Take off immediately all contaminated clothing. P351 Rinse cautiously with water for several minutes.

Other hazards: contains N-Butanol, Cyclohexylamine

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

Brantho-Korrux 2K-Durasolid
Hardener Z34

n-Butanol; CAS 71-36-3

W

> 10

Amin, Polymer (hydrated); CAS 135108-88-2

R

> 20

4,4-Methylenbis (Cyclohexylamin); CAS 1761-71-3

R

< 10

Triethylentatramin; CAS 112-24-3

R

< 5

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.

Inhalation: Remove to fresh air, keep patient warm and at rest, if breathing is irregular or stopped, administer artificial respiration. 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. **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. After ingestion or vomiting a lung examination is recommended.

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 3d; trade names: Hardener-component (Hardener Z34) for Brantho-Korrux 2K-Durasolid

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

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. Avoid skin and eye contact. Avoid inhalation of vapour and spray mist.

Smoking, eating and drinking should be prohibited in application area. Keep containers closed.

For personal protection: see section 8. Comply with the local health and safety laws at work.

7.2. Storage

Requirements for storerooms and containers: Store in a cool place. Keep containers closed. Smoking prohibited. Do not empty using pressure. 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.

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: 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. 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 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 "environmental hazardous-N" labelling-requirements.

9. Physical and chemical properties

Trade names	Brantho-Korrux 2K-Durasolid-Hardener
9.1. Physical state	viscous
Colour	light-brown
Smell	typical
Flash point (DIN 53213)	ca. 44°C
Ignition temperature (DIN 51794)	> 200° C
Fire supporting properties / auto ignition	no/no
Explosion hazard due to	solvent evaporation
Explosion limits Vol. (%) lower/higher	1,5/9,4 (n-butanol)
Vapour pressure at 20°C	< 110
Density at 20°C (depends on colour)	ca. 0,96
Solubility in water at 20°C	partly soluble
Viscosity at 20°C (DIN 53211/4mm);	thixotropic
Viscosity at 20°C (DIN ISO 2431/6mm)	90
Solvent content (% by weight)	ca. 20
9.2. Solvent separation test (ADR/RID)	< 1 %
Solids content/ph value	ca. 80/alkaline

group 3d; trade names: Hardener-component (Hardener Z34) for Brantho-Korrux 2K-Durasolid

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

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:

11.1. 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. Some ingredients may cause allergic reaction.

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-related-material; **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, viscous product in packaging up to 450 ltr., no registration necessary for documents of transportation

transport by sea in accordance with IMDG/GGVSea: not subject to hazardous classification, no marine pollutant, IMO-declaration necessary with "LQ" (viscous product, see 2.3.2.5.), packaging up to 30 ltr.

warning sign 30; EMS 3-05; MFAG FE, SE

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

UN 1263 (paint, flammable); Kl. 3/III; no air-transport organised through manufacturer

15. Regulatory information

15.1. Safety, health and environmental regulations

TA-air (weight %): Kl. I / II / III	0/0/20
water polluting danger classification:	2 = clearly water contaminating
VbF-label/class	no/ N/A
VOC-value (g/l)	ca. 190
Productcode by GISBAU	--

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

16. Other information

I. Indication of changes: MSDS-changes that represent 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

Last revision 19.9.2022

Dat: 19.9.2022

appendix 1/1 (page 4)

tentative translation

group 3c+3d; trade names: Brantho-Korrux 2K-Durasolid - paint- and hardener component Z34

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

- I Xylol; CAS 1330-20-7:** Xylene isomers mixture (Xylene, Ethylbenzol); EINECS 215-535-7; INDEX 601-022-00-9; Reg.-Nr. 01-2119488216-32; Flam.Liq.3 **H226**, Acute Tox.4 **H312+332**, Eye Irrit.2 **H319**, Skin Irrit.2 **H315**, STOT SE3 **H335**, Asp. Tox.1 **H304**; STOT SE2 **H373**; 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
- 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 contact, cosmetics, pharmaceuticals, toys.
- P Bis-[4-(2,3-epoxipropoxy)phenyl]propan; CAS 1675-54-3:** Bis-[4-(2,3-epoxipropoxy)phenyl]propan; CAS 1675-54-3, 28064-14-4, Reg.Nr. 01-2119456619-26, EINECS 216-823-5, 500-108-2, Skin Irrit.2 **H315**, Skin Sens.1 **H317**, Eye Irrit.2 **H319**, Aquatic Chronic2 **H411**, EUH205; kein Grenzwert festgelegt; Ingestion: LD 50 rat 2000 mg/kg; Skinabsorption: LD 50 rabbit > 2000 mg/kg, skin sensitization contains components, that cause allergic skin sensitization at guinea pigs; Inhalation: Due to the low volatility, exposure to vapors is minimal at room temperature; Ecology: The product is toxic to aquatic organisms; LC 50 fish 3,1 mg/l, 96 h; EC 50 water flea 1,4-1,7 mg/l, 48 h, EC 50 bacteria > 42,6 mg/l, 18 h; not readily biodegradable, log Pow 3-5; WGK 2
- R Amin, Polymer (hydrated); CAS 135108-88-2:** Cycloaliphatic Amin, Polymer; Reg.-Nr. 01-2119983522-33; Acute Tox.4 **H302**, Skin Sens.1 **H317**, Skin.Corr.1C **H314**, STOT RE2 **H373**, Aquatic Chronic3 **H412** **4,4-Methylenbis (Cyclohexylamin); CAS 1761-71-3;** EINECS 217-168-8; Reg.-Nr. 01-2119541673-38; Acute Tox.4 **H302**, Skin Sens.1 **H317**, STOT RE 2 **H373**, Skin Corr.1B **H314** **Triethylentatramin; CAS 112-24-3;** EINECS 203-950-6; Reg.-Nr. 01-2119487919-13; no defined limits; Acute Tox.4 **H312**, Skin Sens.1 **H317**, Skin Corr.1B **H314**, Aquatic Chronic3 **H412** Ingestion: LD 50 rat 367 mg/kg; Skinabsorption: LD 50 rabbit > 1000 mg/kg; Inhalation: no data available; sensitization has occurred at laboratory animals after repeated exposure; Ecology: LD 50 fish 46-100 mg/l; 96 h; EC 50 water flea 6,84 mg/l, 48 h; EG 50 alga 140-200 mg/l, 72 h; Biodegradability: no data available; WGK 2
- V Isobutanol CAS-Nr. 78-83-1;** EINECS-Nr. 201-148-0, Index-Nr. 603-108-00-1; Reg.-Nr. 01-2119484609-23 Flam. Liq.3 **H226**, Eye Dam.1 **H318**, STOT SE3 **H335+336**, Skin Irrit.2 **H315** AGW (TRGS 900): 310 mg/m³, 1(l), DFG,Y; toxicology: Oral LD50 rat = 2460mg/kg; dermal LD50 rabbit = 4200mg/kg; inhalativ LC50 rat = 24,6mg/l, 4h; Irritating to skin and mucous membranes. Strong irritant effect on the eye with danger of serious eye damage; Ecology: LC50 fish = 1430mg/l, 96h; EC50 water flea = 1250mg/l, 24h; EC50 bacteria (activated sludge) = 750mg/l, 17h readily biodegradable; not bioaccumulative, log Pow: 0,79; WGK 1
- W n-Butanol CAS-Nr. 71-36-3;** EINECS-Nr. 200-751-6, Index-Nr. 603-004-00-6; Reg.-Nr. 01-2119484630-38 Flam. Liq.3 **H226**, Eye Dam.1 **H318**, Acute Tox.4 **H302**, Skin Irrit.2 **H315**, STOT SE3 **H335+336** AGW (TRGS 900): 310 mg/m³; 1(l), DFG, Y; toxicology: Oral LD50 rat = 790mg/kg; dermal LD50 rabbit = 3400mg/kg; inhalativ LC50 rat = 8000mg/l, 4h; ecology: LC50 fish = 1200mg/l; EC50 water flea = 1855mg/l; EC50 activated sludge = 650mg/l; readily biodegradable; not bioaccumulative, log Pow: 0,88; WGK 1

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

H226 Flammable liquid and vapour; H302 Harmful if swallowed;

H304 May be fatal if swallowed and enters airways; **H312 Harmful in contact with skin;** **H314** Causes severe skin burns and eye damage;

H315 Causes skin irritation; H317 May cause an allergic skin reaction; H318 Causes serious eye damage; **H319** Causes serious eye irritation;

H332 Harmful if inhaled; **H335 May cause respiratory irritation; H336 May cause drowsiness or dizziness;**

H373 May cause damage to organs through prolonged or repeated exposure;

H411 Toxic to aquatic life with long lasting effects; H412 Harmful to aquatic life with long lasting effects;

P92 Contains epoxy constituents. Please follow the manufacturer's instructions; P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.; P280 Wear protective gloves/protective clothing/eye protection/face protection;

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water (or shower);

P370+P378 In case of fire: Use dry sand, dry extinguishing agents or alcohol-resistant foam to extinguish;

P403+P235 Store in a well-ventilated place. Keep cool.; EUH205 Contains epoxy constituents. May produce an allergic reaction.