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20808-0059

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R134

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

| | |
|---|--|
| MANUFACTURER'S NAME STAEDTLER MARS GmbH & Co. | EMERGENCY TELEPHONE NO. 0911 / 30 80 319 |
| ADDRESS (Number, Street, City, State, and ZIP Code) Moosäckerstraße 3, D-8500 Nürnberg 90 | |
| CHEMICAL NAME AND SYNONYMS CALLIGRAPH DUO 3002 Black Ink | TRADE NAME AND SYNONYMS |
| CHEMICAL FAMILY | FORMULA |

SECTION II - HAZARDOUS INGREDIENTS

| PAINTS, PRESERVATIVES, & SOLVENTS | % | TLV (Unit) | ALLOYS AND METALLIC COATINGS | % | TLV (Unit) |
|---|---|-----------------------|---|---|------------|
| PIGMENTS | | | BASE METAL | | |
| CATALYST | | | ALLOYS | | |
| VEHICLE | | | METALLIC COATINGS | | |
| SOLVENTS Ethylene Glycohol | 8 | TWA VAPOR 50ppm | FILLER METAL PLUS COATING OR CORE FLUX | | |
| ADDITIVES | | | OTHERS | | |
| OTHERS | | | | | |
| HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES | | | | % | TLV (Unit) |
| none | | | | | |

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SECTION III - PHYSICAL DATA

| | | | |
|-------------------------|--|---------------------------------------|------|
| BOILING POINT (°F.) | N.D. | SPECIFIC GRAVITY (H ₂ O=1) | 1.14 |
| VAPOR PRESSURE (mm Hg.) | N.D. | PERCENT VOLATILE BY VOLUME (%) | 85 |
| VAPOR DENSITY (AIR=1) | N.D. | EVAPORATION RATE (—=1) | N.D. |
| SOLUBILITY IN WATER | soluble | | |
| APPEARANCE AND ODOR | Black colored reiquid with low viscosity | | |

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

| | | | | | |
|------------------------------------|------|------------------|------|----------------|----------------|
| FLASH POINT (Method used) | N.D. | FLAMMABLE LIMITS | N.A. | L ₁ | U ₁ |
| EXTINGUISHING MEDIA | N.D. | | | | |
| SPECIAL FIRE FIGHTING PROCEDURES | N.D. | | | | |
| UNUSUAL FIRE AND EXPLOSION HAZARDS | none | | | | |

| SECTION V - HEALTH HAZARD DATA | |
|---|------|
| THRESHOLD LIMIT VALUE | N.D. |
| EFFECTS OF OVEREXPOSURE | N.D. |
| EMERGENCY AND FIRST AID PROCEDURES | |
| Eyes: Immediately flush with water enough and see a physician. | |
| Skin: Wash with soap water enough. | |
| Ingestion: Do not induce vomiting, see a phisician immediately. | |

| SECTION VI - REACTIVITY DATA | | | |
|---|----------------|---|---------------------|
| STABILITY | UNSTABLE | | CONDITIONS TO AVOID |
| | STABLE | X | none |
| INCOMPATIBILITY (Materials to avoid) N.D. | | | |
| HAZARDOUS DECOMPOSITION PRODUCTS N.D. | | | |
| HAZARDOUS POLYMERIZATION | MAY OCCUR | | CONDITIONS TO AVOID |
| | WILL NOT OCCUR | X | none |

| SECTION VII - SPILL OR LEAK PROCEDURES | |
|--|--|
| STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED | |
| Wash with water and remove with cloth. | |
| WASTE DISPOSAL METHOD | |
| Waste disposal should be in accordance with existing federal, estate and local environmental regulations.. | |

| SECTION VIII - SPECIAL PROTECTION INFORMATION | | |
|---|----------------------|---------------------------|
| RESPIRATORY PROTECTION (Specify type) N.D. | | |
| VENTILATION NO | LOCAL EXHAUST | SPECIAL |
| | MECHANICAL (General) | OTHER |
| PROTECTIVE GLOVES Rubber to prevent skin stain | | EYE PROTECTION Goggles |
| OTHER PROTECTIVE EQUIPMENT N.D. | | |

| SECTION IX - SPECIAL PRECAUTIONS | |
|---|--|
| PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING | |
| Storing: avoid high temperature or freezing. | |
| OTHER PRECAUTIONS none | |

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1347

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

| | |
|---|--|
| MANUFACTURER'S NAME STAEDTLER MARS GmbH & Co. | EMERGENCY TELEPHONE NO. 0911 / 30 80 319 |
| ADDRESS (Number, Street, City, State, and ZIP Code) Moosäckerstraße 3, D-8500 Nürnberg 90 | |
| CHEMICAL NAME AND SYNONYMS CALLIGRAPH DUO 3002 Violet Ink | TRADE NAME AND SYNONYMS |
| CHEMICAL FAMILY | FORMULA |

SECTION II - HAZARDOUS INGREDIENTS

| PAINTS, PRESERVATIVES, & SOLVENTS | % | TLV (Unit) | ALLOYS AND METALLIC COATINGS | % | TLV (Unit) |
|---|---|-----------------------|---|---|------------|
| PIGMENTS | | | BASE METAL | | |
| CATALYST | | | ALLOYS | | |
| VEHICLE | | | METALLIC COATINGS | | |
| SOLVENTS Ethylene Glycol | 7 | TWA VAPOR 50ppm | FILLER METAL PLUS COATING OR CORE FLUX | | |
| ADDITIVES | | | OTHERS | | |
| OTHERS | | | | | |
| HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES | | | | % | TLV (Unit) |
| none | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

SECTION III - PHYSICAL DATA

| | | | |
|---|---------|---------------------------------------|------|
| BOILING POINT (°F.) | N.D. | SPECIFIC GRAVITY (H ₂ O=1) | 1.08 |
| VAPOR PRESSURE (mm Hg.) | N.D. | PERCENT VOLATILE BY VOLUME (%) | 92 |
| VAPOR DENSITY (AIR=1) | N.D. | EVAPORATION RATE (H ₂ O=1) | N.D. |
| SOLUBILITY IN WATER | soluble | | |
| APPEARANCE AND ODOR Violet colored reiquid with low viscosity | | | |

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

| | | | | | |
|---|------|------------------|------|-----|-----|
| FLASH POINT (Method used) | N.D. | FLAMMABLE LIMITS | N.A. | Lel | Uel |
| EXTINGUISHING MEDIA | N.D. | | | | |
| SPECIAL FIRE FIGHTING PROCEDURES | N.D. | | | | |
| UNUSUAL FIRE AND EXPLOSION HAZARDS none | | | | | |

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| SECTION V - HEALTH HAZARD DATA | |
|---|------|
| THRESHOLD LIMIT VALUE | N.D. |
| EFFECTS OF OVEREXPOSURE | N.D. |
| EMERGENCY AND FIRST AID PROCEDURES | |
| Eyes: Immediately flush with water enough and see a physician. | |
| Skin: Wash with soap water enough. | |
| Ingestion: Do not induce vomiting, see a physician immediately. | |

| SECTION VI - REACTIVITY DATA | | | |
|---|----------------|---|---------------------|
| STABILITY | UNSTABLE | | CONDITIONS TO AVOID |
| | STABLE | X | none |
| INCOMPATIBILITY (Materials to avoid) N.D. | | | |
| HAZARDOUS DECOMPOSITION PRODUCTS N.D. | | | |
| HAZARDOUS POLYMERIZATION | MAY OCCUR | | CONDITIONS TO AVOID |
| | WILL NOT OCCUR | X | none |

| SECTION VII - SPILL OR LEAK PROCEDURES | |
|---|--|
| STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED | |
| Wash with water and remove with cloth. | |
| WASTE DISPOSAL METHOD | |
| Waste disposal should be in accordance with existing federal, estate and local environmental regulations. | |

| SECTION VIII - SPECIAL PROTECTION INFORMATION | | |
|---|------------------------------|---------------------------|
| RESPIRATORY PROTECTION (Specify type) N.D. | | |
| VENTILATION | LOCAL EXHAUST | SPECIAL |
| | MECHANICAL (General) | OTHER |
| PROTECTIVE GLOVES | Rubber to prevent skin stain | EYE PROTECTION Goggles |
| OTHER PROTECTIVE EQUIPMENT N.D. | | |

| SECTION IX - SPECIAL PRECAUTIONS | |
|---|--|
| PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING | |
| Sorting: avoid high temperature or freezing. | |
| OTHER PRECAUTIONS none | |

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-813

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

| SECTION I | |
|---|--|
| MANUFACTURER'S NAME STAEDTLER MARS GmbH & Co. | EMERGENCY TELEPHONE NO. 0911 / 30 80 319 |
| ADDRESS (Number, Street, City, State, and ZIP Code) Moosäckerstraße 3, D-8500 Nürnberg 90 | |
| CHEMICAL NAME AND SYNONYMS | TRADE NAME AND SYNONYMS CALLIGRAPH DUO 3002 Blue Ink |
| CHEMICAL FAMILY | FORMULA |

| SECTION II - HAZARDOUS INGREDIENTS | | | | | |
|---|---|------------------------------|--|---|------------|
| PAINTS, PRESERVATIVES, & SOLVENTS | % | TLV (Umgl) | ALLOYS AND METALLIC COATINGS | % | TLV (Umgl) |
| PIGMENTS | | | BASE METAL | | |
| CATALYST | | | ALLOYS | | |
| VEHICLE | | | METALLIC COATINGS | | |
| SOLVENTS Ethylene Glycohol | | TWA 8.5 VAPOR 50ppm | FILLER METAL PLUS COATING OR CORE FLUX | | |
| ADDITIVES | | | OTHERS | | |
| OTHERS | | | | | |
| HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES | | | | % | TLV (Umgl) |
| none | | | | | |

| SECTION III - PHYSICAL DATA | | | |
|-----------------------------|---|---------------------------------------|------|
| BOILING POINT (°F.) | N.D. | SPECIFIC GRAVITY (H ₂ O=1) | 1.09 |
| VAPOR PRESSURE (mm Hg.) | N.D. | PERCENT. VOLATILE BY VOLUME (%) | 85 |
| VAPOR DENSITY (AIR=1) | N.D. | EVAPORATION RATE (____=1) | N.D. |
| SOLUBILITY IN WATER | soluble | | |
| APPEARANCE AND ODOR | Blue colored reiquid with low viscosity | | |

| SECTION IV - FIRE AND EXPLOSION HAZARD DATA | | | |
|---|------|------------------|------|
| FLASH POINT (Method used) | N.D. | FLAMMABLE LIMITS | N.A. |
| EXTINGUISHING MEDIA | N.D. | | |
| SPECIAL FIRE FIGHTING PROCEDURES | N.D. | | |
| UNUSUAL FIRE AND EXPLOSION HAZARDS | none | | |

| SECTION V - HEALTH HAZARD DATA | |
|---|------|
| THRESHOLD LIMIT VALUE | N.D. |
| EFFECTS OF OVEREXPOSURE | N.D. |
| EMERGENCY AND FIRST AID PROCEDURES | |
| Eyes: Immediately flush with water enough and see a physician. | |
| Skin: Wash with soap water enough. | |
| Ingestion: Do not induce vomiting, see a physician immediately. | |

| SECTION VI - REACTIVITY DATA | | | |
|---|----------------|---|---------------------|
| STABILITY | UNSTABLE | | CONDITIONS TO AVOID |
| | STABLE | X | none |
| INCOMPATABILITY (Materials to avoid) N.D. | | | |
| HAZARDOUS DECOMPOSITION PRODUCTS N.D. | | | |
| HAZARDOUS POLYMERIZATION | MAY OCCUR | | CONDITIONS TO AVOID |
| | WILL NOT OCCUR | X | none |

| SECTION VII - SPILL OR LEAK PROCEDURES | |
|---|--|
| STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED | |
| Wash with water and remove with cloth. | |
| WASTE DISPOSAL METHOD | |
| Waste disposal should be in accordance with existing federal, estate and local environmental regulations. | |

| SECTION VIII - SPECIAL PROTECTION INFORMATION | | |
|---|------------------------------|---------------------------|
| RESPIRATORY PROTECTION (Specify type) N.D. | | |
| VENTILATION | LOCAL EXHAUST | SPECIAL |
| | MECHANICAL (General) | OTHER |
| PROTECTIVE GLOVES | Rubber to prevent skin stain | EYE PROTECTION Goggles |
| OTHER PROTECTIVE EQUIPMENT N.D. | | |

| SECTION IX - SPECIAL PRECAUTIONS | |
|---|--|
| PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING | |
| Storing: avoid high temperature or freezing. | |
| OTHER PRECAUTIONS none | |

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Occupational Safety and Health Administration

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MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

| SECTION I | | | |
|---|---------------|--|--|
| MANUFACTURER'S NAME STAEDTLER MARS GmbH & Co. | 62311550 ma d | EMERGENCY TELEPHONE NO., 0911 / 30 80 319 | |
| ADDRESS (Number, Street, City, State, and ZIP Code) | | Moosäckerstraße 3, D-8500 Nürnberg 90 | |
| CHEMICAL NAME AND SYNONYMS | | TRADE NAME AND SYNONYMS CALLIGRAPH DUO 3002 Brown Ink | |
| CHEMICAL FAMILY | | FORMULA | |

| SECTION II - HAZARDOUS INGREDIENTS | | | | | |
|---|---|-----------------------|---|---|---------------|
| PAINTS, PRESERVATIVES, & SOLVENTS | % | TLV (Unit) | ALLOYS AND METALLIC COATINGS | % | TLV (Unit) |
| PIGMENTS | | | BASE METAL | | |
| CATALYST | | | ALLOYS | | |
| VEHICLE | | | METALLIC COATINGS | | |
| SOLVENTS Ethylene Glycohol | 8 | TWA vapor 50ppm | FILLER METAL PLUS COATING OR CORE FLUX | | |
| ADDITIVES | | | OTHERS | | |
| OTHERS | | | | | |
| HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES | | | | % | TLV (Unit) |
| none | | | | | |

| SECTION III - PHYSICAL DATA | | | |
|--|---------|---------------------------------------|------|
| BOILING POINT (°F.) | N.D. | SPECIFIC GRAVITY (H ₂ O=1) | 1.09 |
| VAPOR PRESSURE (mm Hg.) | N.D. | PERCENT VOLATILE BY VOLUME (%) | 90 |
| VAPOR DENSITY (AIR=1) | N.D. | EVAPORATION RATE (— = 1) | N.D. |
| SOLUBILITY IN WATER | soluble | | |
| APPEARANCE AND ODOR Brown colored reiquid with low viscosity | | | |

| SECTION IV - FIRE AND EXPLOSION HAZARD DATA | | | |
|---|------|------------------|------|
| FLASH POINT (Method used) | N.D. | FLAMMABLE LIMITS | N.A. |
| EXTINGUISHING MEDIA | N.D. | | |
| SPECIAL FIRE FIGHTING PROCEDURES | N.D. | | |
| UNUSUAL FIRE AND EXPLOSION HAZARDS | none | | |

| SECTION V - HEALTH HAZARD DATA | |
|---|------|
| THRESHOLD LIMIT VALUE | N.D. |
| EFFECTS OF OVEREXPOSURE | N.D. |
| EMERGENCY AND FIRST AID PROCEDURES | |
| Eyes: Immediately flush with water enough and see a physician. | |
| Skin: Wash with soap water enough. | |
| Ingestion: Do not induce vomiting, see a physician immediately. | |

| SECTION VI - REACTIVITY DATA | | | |
|---|----------------|---|---------------------|
| STABILITY | UNSTABLE | | CONDITIONS TO AVOID |
| | STABLE | X | none |
| INCOMPATIBILITY (Materials to avoid) N.D. | | | |
| HAZARDOUS DECOMPOSITION PRODUCTS N.D. | | | |
| HAZARDOUS POLYMERIZATION | MAY OCCUR | | CONDITIONS TO AVOID |
| | WILL NOT OCCUR | X | none |

| SECTION VII - SPILL OR LEAK PROCEDURES | |
|---|--|
| STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED | |
| Wash with water and remove with cloth. | |
| WASTE DISPOSAL METHOD | |
| Waste disposal should be in accordance with existing federal, estate and local environmental regulations. | |

| SECTION VIII - SPECIAL PROTECTION INFORMATION | | |
|---|----------------------|---------------------------|
| RESPIRATORY PROTECTION (Specify type) N.D. | | |
| VENTILATION NO | LOCAL EXHAUST | SPECIAL |
| | MECHANICAL (General) | OTHER |
| PROTECTIVE GLOVES Rubber to prevent skin stain | | EYE PROTECTION Goggles |
| OTHER PROTECTIVE EQUIPMENT N.D. | | |

| SECTION IX - SPECIAL PRECAUTIONS | |
|---|--|
| PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING | |
| Sorting: avoid high temperature or freezing. | |
| OTHER PRECAUTIONS none | |

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-11347

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

| SECTION I | |
|---|--|
| MANUFACTURER'S NAME STAEDTLER MARS GmbH & Co. | EMERGENCY TELEPHONE NO. 0911 / 30 80 319 |
| ADDRESS (Number, Street, City, State, and ZIP Code) Moosäckerstraße 3, D-8500 Nürnberg 90 | |
| CHEMICAL NAME AND SYNONYMS CALLIGRAPH DUO 3002 Red Ink | TRADE NAME AND SYNONYMS |
| CHEMICAL FAMILY | FORMULA |

| SECTION II - HAZARDOUS INGREDIENTS | | | | | |
|---|---|-----------------------|---|---|------------|
| PAINTS, PRESERVATIVES, & SOLVENTS | % | TLV (Unit) | ALLOYS AND METALLIC COATINGS | % | TLV (Unit) |
| PIGMENTS | | | BASE METAL | | |
| CATALYST | | | ALLOYS | | |
| VEHICLE | | | METALLIC COATINGS | | |
| SOLVENTS Ethylene Glycohol | 8 | TWA Vapor 50ppm | FILLER METAL PLUS COATING OR CORE FLUX | | |
| ADDITIVES | | | OTHERS | | |
| OTHERS | | | | | |
| HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES | | | | % | TLV (Unit) |
| none | | | | | |

| SECTION III - PHYSICAL DATA | | | |
|-----------------------------|--|---------------------------------------|------|
| BOILING POINT (°F) | N.D. | SPECIFIC GRAVITY (H ₂ O=1) | 1.09 |
| VAPOR PRESSURE (mm Hg.) | N.D. | PERCENT. VOLATILE BY VOLUME (%) | 85 |
| VAPOR DENSITY (AIR=1) | N.D. | EVAPORATION RATE (_____ =1) | N.D. |
| SOLUBILITY IN WATER | soluble | | |
| APPEARANCE AND ODOR | Red colored reiquid with low viscosity | | |

| SECTION IV - FIRE AND EXPLOSION HAZARD DATA | | | |
|---|------|------------------|------|
| FLASH POINT (Method used) | N.D. | FLAMMABLE LIMITS | N.A. |
| EXTINGUISHING MEDIA | N.D. | | |
| SPECIAL FIRE FIGHTING PROCEDURES | N.D. | | |
| UNUSUAL FIRE AND EXPLOSION HAZARDS | none | | |

| SECTION V - HEALTH HAZARD DATA | |
|---|------|
| THRESHOLD LIMIT VALUE | N.D. |
| EFFECTS OF OVEREXPOSURE | N.D. |
| EMERGENCY AND FIRST AID PROCEDURES | |
| Eyes: Immediately flush with water enough and see a phvsician. | |
| Skin: Wash with soap water enough. | |
| Ingestion: Do not induce vomiting, see a phisician immediately. | |

| SECTION VI - REACTIVITY DATA | | | |
|---|----------------|---|---------------------|
| STABILITY | UNSTABLE | | CONDITIONS TO AVOID |
| | STABLE | X | none |
| INCOMPATABILITY <i>(Materials to avoid)</i> | | | |
| N.D. | | | |
| HAZARDOUS DECOMPOSITION PRODUCTS | | | |
| N.D. | | | |
| HAZARDOUS POLYMERIZATION | MAY OCCUR | | CONDITIONS TO AVOID |
| | WILL NOT OCCUR | X | none |

| SECTION VII - SPILL OR LEAK PROCEDURES | |
|---|--|
| STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED | |
| Wash with water and remove with cloth. | |
| WASTE DISPOSAL METHOD | |
| Waste disposal should be in accordance with existing federal, estate and local environmental regulations. | |

| SECTION VIII - SPECIAL PROTECTION INFORMATION | | |
|---|-----------------------------|---------|
| RESPIRATORY PROTECTION <i>(Specify type)</i> | | |
| N.D. | | |
| VENTILATION | LOCAL EXHAUST | SPECIAL |
| | MECHANICAL <i>(General)</i> | OTHER |
| NO | | |
| PROTECTIVE GLOVES | EYE PROTECTION | |
| Rubber to prevent skin stain | Goggles | |
| OTHER PROTECTIVE EQUIPMENT | | |
| N.D. | | |

| SECTION IX - SPECIAL PRECAUTIONS | |
|---|------|
| PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING | |
| Sortting: avoid high temperature or freezing. | |
| OTHER PRECAUTIONS | none |