

SAFETY DATA SHEET

1. Identification

| | | | |
|--|---|----------------|-------------------------------|
| Product identifier | Electrodag 502 | | |
| Other means of identification | | | |
| SDS number | SDS-00050 | | |
| Product code | 138-13 | | |
| Recommended use | Conductive Paint Package | | |
| Recommended restrictions | None known. | | |
| Manufacturer/Importer/Supplier/Distributor information | | | |
| Company name | ABB Installation Products Inc. | | |
| Address | 860 Ridge Lake Blvd. Memphis, TN 38120 US | | |
| Telephone | 901-252-5000 ext.8324 | | |
| E-mail | Not available. | | |
| Emergency phone number | INFOTRAC - 24 HOURS: | 1-800-535-5053 | |
| | | | +1 352-323-3500 (Outside USA) |

2. Hazard(s) identification

| | | |
|-----------------------------|---|-----------------------------|
| Physical hazards | Flammable liquids | Category 2 |
| Health hazards | Serious eye damage/eye irritation | Category 2A |
| | Specific target organ toxicity, single exposure | Category 3 narcotic effects |
| OSHA defined hazards | Not classified. | |

Label elements



| | |
|-------------------------|--|
| Signal word | Danger |
| Hazard statement | Highly flammable liquid and vapor. Causes serious eye irritation. May cause drowsiness or dizziness. |

Precautionary statement

| | |
|--|---|
| Prevention | Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist/vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/eye protection/face protection. |
| Response | If exposed or concerned: Get medical advice/attention. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Extinguish with foam, carbon dioxide, dry powder or water fog. |
| Storage | Keep cool. Store in a well-ventilated place. Keep container tightly closed. Store locked up. |
| Disposal | Dispose of contents/container in accordance with local/regional/national/international regulations. |
| Hazard(s) not otherwise classified (HNOC) | None known. |
| Supplemental information | None. |

3. Composition/information on ingredients

Mixtures

| Chemical name | CAS number | % |
|------------------------------|------------|----------|
| Methyl ethyl ketone | 78-93-3 | 50 - 100 |
| Proprietary Synthetic Rubber | N/A | < 20 |
| Carbon black | 1333-86-4 | < 5 |
| Graphite | 7782-42-5 | < 5 |

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

| | |
|--|---|
| Inhalation | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell. |
| Skin contact | Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention if irritation develops and persists. |
| Eye contact | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. |
| Ingestion | Rinse mouth. Get medical attention if symptoms occur. |
| Most important symptoms/effects, acute and delayed | May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. |
| Indication of immediate medical attention and special treatment needed | Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed. |
| General information | Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse. |

5. Fire-fighting measures

| | |
|---|--|
| Suitable extinguishing media | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂). |
| Unsuitable extinguishing media | Do not use water jet as an extinguisher, as this will spread the fire. |
| Specific hazards arising from the chemical | Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed. |
| Special protective equipment and precautions for firefighters | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| Fire fighting equipment/instructions | In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. |
| Specific methods | Use standard firefighting procedures and consider the hazards of other involved materials. |
| General fire hazards | Highly flammable liquid and vapor. |

6. Accidental release measures

| | |
|---|---|
| Personal precautions, protective equipment and emergency procedures | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. |
|---|---|

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Environmental precautions

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid contact with eyes. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

| Components | Type | Value | Form |
|-----------------------------------|------|-----------|----------------------|
| Carbon black (CAS 1333-86-4) | PEL | 3.5 mg/m3 | |
| Graphite (CAS 7782-42-5) | PEL | 5 mg/m3 | Respirable fraction. |
| | | 15 mg/m3 | Total dust. |
| Methyl ethyl ketone (CAS 78-93-3) | PEL | 590 mg/m3 | |
| | | 200 ppm | |

US. OSHA Table Z-3 (29 CFR 1910.1000)

| Components | Type | Value |
|--------------------------|------|----------|
| Graphite (CAS 7782-42-5) | TWA | 15 mppcf |

US. ACGIH Threshold Limit Values

| Components | Type | Value | Form |
|-----------------------------------|------|---------|----------------------|
| Carbon black (CAS 1333-86-4) | TWA | 3 mg/m3 | Inhalable fraction. |
| Graphite (CAS 7782-42-5) | TWA | 2 mg/m3 | Respirable fraction. |
| Methyl ethyl ketone (CAS 78-93-3) | STEL | 300 ppm | |
| | TWA | 200 ppm | |

US. NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value | Form |
|-----------------------------------|------|-----------|-------------|
| Carbon black (CAS 1333-86-4) | TWA | 3.5 mg/m3 | |
| Graphite (CAS 7782-42-5) | TWA | 2.5 mg/m3 | Respirable. |
| Methyl ethyl ketone (CAS 78-93-3) | STEL | 885 mg/m3 | |
| | | 300 ppm | |
| | TWA | 590 mg/m3 | |

200 ppm

Biological limit values

ACGIH Biological Exposure Indices

| Components | Value | Determinant | Specimen | Sampling Time |
|------------|-------|-------------|----------|---------------|
|------------|-------|-------------|----------|---------------|

| | | | | |
|-----------------------------------|--------|-----|-------|---|
| Methyl ethyl ketone (CAS 78-93-3) | 2 mg/l | MEK | Urine | * |
|-----------------------------------|--------|-----|-------|---|

* - For sampling details, please see the source document.

Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

Skin protection

Other Wear appropriate chemical resistant clothing.

Respiratory protection Gas mask with organic vapor canister and dust and mist filter. Wear NIOSH approved respirator appropriate for airborne exposure at the point of use.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Liquid.

Color Black.

Odor Not available.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point 23°F (-5°C)

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density Not available.

Relative density Not available.

| | |
|--|---|
| Solubility(ies) | |
| Solubility (water) | Not available. |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity | 600 ± 200 mPa-s (Brookfield RVT @ 20 rpm) |
| Other information | |
| Density | 7.2 lbs/gal (0.87 kg/l) |
| Explosive properties | Not explosive. |
| Oxidizing properties | Not oxidizing. |
| VOC | 6.30 lb/gal (755 g/l) |
| Weighted solids | 13% |

10. Stability and reactivity

| | |
|---|---|
| Reactivity | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| Chemical stability | Material is stable under normal conditions. |
| Possibility of hazardous reactions | No dangerous reaction known under conditions of normal use. |
| Conditions to avoid | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials. |
| Incompatible materials | Acids. Strong oxidizing agents. Strong reducing agents. Amines. Ammonia. Caustics. Chlorine. Isocyanates. |
| Hazardous decomposition products | Carbon oxides. |

11. Toxicological information

Information on likely routes of exposure

| | |
|---|---|
| Inhalation | May cause irritation to the respiratory system. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful. |
| Skin contact | May cause skin irritation. |
| Eye contact | Causes serious eye irritation. |
| Ingestion | May cause discomfort if swallowed. |
| Symptoms related to the physical, chemical and toxicological characteristics | May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. |

Information on toxicological effects

| | |
|-----------------------|-----------------------------------|
| Acute toxicity | Not expected to be acutely toxic. |
|-----------------------|-----------------------------------|

| Components | Species | Test Results |
|-----------------------------------|---------|--------------------|
| Carbon black (CAS 1333-86-4) | | |
| <u>Acute</u> | | |
| Dermal | | |
| LD50 | Rabbit | > 3000 mg/kg |
| Oral | | |
| LD50 | Rat | > 8000 mg/kg |
| Methyl ethyl ketone (CAS 78-93-3) | | |
| <u>Acute</u> | | |
| Dermal | | |
| LD50 | Rat | 6400 mg/kg |
| Inhalation | | |
| <i>Vapor</i> | | |
| LC50 | Rat | 34.5 mg/l, 4 Hours |

| Components | Species | Test Results |
|--|--|--------------|
| Oral LD50 | Rat | 2600 mg/kg |
| Skin corrosion/irritation | May cause skin irritation. | |
| Serious eye damage/eye irritation | Causes serious eye irritation. | |
| Respiratory or skin sensitization | | |
| Respiratory sensitization | Not a respiratory sensitizer. | |
| Skin sensitization | Not a skin sensitizer. | |
| Germ cell mutagenicity | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. | |
| Carcinogenicity | Inhalation of carbon black dust may cause cancer, however due to the physical form of the product, inhalation of dust is not likely. | |
| IARC Monographs. Overall Evaluation of Carcinogenicity | | |
| Carbon black (CAS 1333-86-4) | 2B Possibly carcinogenic to humans. | |
| NTP Report on Carcinogens | | |
| Not listed. | | |
| OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) | | |
| Not regulated. | | |
| Reproductive toxicity | This product is not expected to cause reproductive or developmental effects. | |
| Specific target organ toxicity - single exposure | May cause drowsiness and dizziness. | |
| Specific target organ toxicity - repeated exposure | Not classified. | |
| Aspiration hazard | Not an aspiration hazard. | |
| Chronic effects | Prolonged inhalation may be harmful. | |

12. Ecological information

| | |
|--------------------|--|
| Ecotoxicity | The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. |
|--------------------|--|

| Components | Species | | Test Results |
|---|--|---------------------|------------------------|
| Carbon black (CAS 1333-86-4) | | | |
| Aquatic | | | |
| Acute | | | |
| Fish | LC50 | Leuciscus idus | >= 1000 mg/l, 96 Hours |
| Graphite (CAS 7782-42-5) | | | |
| Aquatic | | | |
| Fish | LC50 | Oncorhynchus mykiss | > 1000 mg/l |
| Methyl ethyl ketone (CAS 78-93-3) | | | |
| Aquatic | | | |
| Acute | | | |
| Crustacea | EC50 | Daphnia magna | 5091 mg/l, 48 Hours |
| Fish | LC50 | Pimephales promelas | 3220 mg/l, 96 Hours |
| Persistence and degradability | No data is available on the degradability of this product. | | |
| Bioaccumulative potential | | | |
| Partition coefficient n-octanol / water (log Kow) | | | |
| Methyl ethyl ketone (CAS 78-93-3) | 0.29 | | |
| Mobility in soil | Expected to be mobile in soil. | | |
| Other adverse effects | The product contains a substance which has a photochemical ozone creation potential. | | |

13. Disposal considerations

| | |
|------------------------------|--|
| Disposal instructions | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Dispose of contents/container in accordance with local/regional/national/international regulations. |
|------------------------------|--|

| | |
|--|--|
| Local disposal regulations | Dispose in accordance with all applicable regulations. |
| Hazardous waste code | D001: Waste Flammable material with a flash point <140 °F(60°C). The waste code should be assigned in discussion between the user, the producer and the waste disposal company. |
| Waste from residues / unused products | Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). |
| Contaminated packaging | Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. |

14. Transport information

DOT

| | |
|-------------------------------------|---|
| UN number | UN1993 |
| UN proper shipping name | Flammable liquids, n.o.s. (Methyl ethyl ketone RQ = 5000 LBS) |
| Transport hazard class(es) | |
| Class | 3 |
| Subsidiary risk | - |
| Label(s) | 3 |
| Packing group | II |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Special provisions | IB2, T7, TP1, TP8, TP28 |
| Packaging exceptions | 150 |
| Packaging non bulk | 202 |
| Packaging bulk | 242 |

IATA

| | |
|-------------------------------------|---|
| UN number | UN1993 |
| UN proper shipping name | Flammable liquid, n.o.s. (Methyl ethyl ketone) |
| Transport hazard class(es) | |
| Class | 3 |
| Subsidiary risk | - |
| Packing group | II |
| Environmental hazards | No. |
| ERG Code | 3H |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |

IMDG

| | |
|-------------------------------------|---|
| UN number | UN1993 |
| UN proper shipping name | FLAMMABLE LIQUID, N.O.S. (Methyl ethyl ketone) |
| Transport hazard class(es) | |
| Class | 3 |
| Subsidiary risk | - |
| Packing group | II |
| Environmental hazards | |
| Marine pollutant | No. |
| EmS | F-E, S-E |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Methyl ethyl ketone (CAS 78-93-3) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes

Classified hazard categories

Flammable (gases, aerosols, liquids, or solids)
Serious eye damage or eye irritation
Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Contains component(s) regulated under the Safe Drinking Water Act.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Methyl ethyl ketone (CAS 78-93-3) 6714

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Methyl ethyl ketone (CAS 78-93-3) 35 %WV

DEA Exempt Chemical Mixtures Code Number

Methyl ethyl ketone (CAS 78-93-3) 6714

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Methyl ethyl ketone (CAS 78-93-3) Low priority

US state regulations

US. Massachusetts RTK - Substance List

Carbon black (CAS 1333-86-4)
Graphite (CAS 7782-42-5)
Methyl ethyl ketone (CAS 78-93-3)

US. New Jersey Worker and Community Right-to-Know Act

Carbon black (CAS 1333-86-4)
Graphite (CAS 7782-42-5)
Methyl ethyl ketone (CAS 78-93-3)

US. Pennsylvania Worker and Community Right-to-Know Law

Carbon black (CAS 1333-86-4)
Graphite (CAS 7782-42-5)
Methyl ethyl ketone (CAS 78-93-3)

US. Rhode Island RTK

Carbon black (CAS 1333-86-4)
Graphite (CAS 7782-42-5)
Methyl ethyl ketone (CAS 78-93-3)

California Proposition 65



WARNING: This product can expose you to Carbon black, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

Carbon black (CAS 1333-86-4) Listed: February 21, 2003

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Carbon black (CAS 1333-86-4)
Methyl ethyl ketone (CAS 78-93-3)

International Inventories

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|----------------------|--|------------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | No |

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|--|------------------------|
| Canada | Domestic Substances List (DSL) | No |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | No |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | No |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | No |
| Korea | Existing Chemicals List (ECL) | No |
| New Zealand | New Zealand Inventory | No |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | No |
| Taiwan | Taiwan Chemical Substance Inventory (TCSI) | No |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

| | |
|----------------------|--|
| Issue date | 02-February-2016 |
| Revision date | 18-June-2024 |
| Version | C |
| HMIS® ratings | Health: 2 Flammability: 3 Physical hazard: 0 |

NFPA ratings



Disclaimer

ABB Installation Products Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.