



SAFETY DATA SHEET

according to Regulation (EU) 2015/830

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Chromex(TM) Binder A [EU]

Revision 1
Revision date 2021-08-03

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name Chromex(TM) Binder A [EU]

1.3. Details of the supplier of the safety data sheet

Company Ransom & Randolph
Address 3535 Briarfield Boulevard, PO Box 1570
Maumee, Ohio 43537 USA
Web www.ransom-randolph.com
Telephone +1 (419) 865-9497
Fax +1 (419) 865-9997
Email SDS@ransom-randolph.com
Email address of the competent person dyouel@ransom-randolph.com

1.4. Emergency telephone number

Emergency telephone number USA +1 419 865 9497
Company Ransom & Randolph Co.
08:00-17:00 (US Eastern Std. / GMT minus 5)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.2. Classification - EC 1272/2008 Flam. Liq. 2: H225; Eye Irrit. 2: H319; Carc. 2: H351; STOT SE 1: H370;

2.2. Label elements

Hazard pictograms



Signal Word

Danger

Hazard Statement

Flam. Liq. 2: H225 - Highly flammable liquid and vapour.
Eye Irrit. 2: H319 - Causes serious eye irritation.
Carc. 2: H351 - Suspected of causing cancer inhalation.
STOT SE 1: H370 - Causes damage to organs optic nerve and central nervous system .

Precautionary Statement: Prevention

P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting// equipment.
P242 - Use only non-sparking tools.

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2.2. Label elements

| | |
|--|---|
| Precautionary Statement: Response | P243 - Take precautionary measures against static discharge. P260 - Do not breathe dust/fume/gas/mist/vapours/spray. P264 - Wash (hands) thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. 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/shower. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 - IF exposed or concerned: Get medical advice/attention. P321 - Specific treatment (see on this label). P337+P313 - If eye irritation persists: Get medical advice/attention. P370+P378 - In case of fire: Use carbon dioxide (CO ₂), Alcohol resistant foam, Dry chemical to extinguish. |
| Precautionary Statement: Storage | P403+P235 - Store in a well-ventilated place. Keep cool. |
| Precautionary Statement: Disposal | P405 - Store locked up. P501 - Dispose of contents/container to local and national regulations |

Further information

Not applicable. PBT and vPvB assessment.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

EC 1272/2008

| Chemical Name | Index No. | CAS No. | EC No. | REACH Registration Number | Conc. (%w/w) | Classification |
|--|--------------|------------|-----------|---------------------------|--------------|--|
| Tetraethyl silicate (Tetraethyl orthosilicate) | 014-005-00-0 | 78-10-4 | 201-083-8 | | | Flam. Liq. 3: H226; Acute Tox. 4: H332; Eye Irrit. 2: H319; STOT SE 3: H335; Flam. Liq. 2: H225; |
| Ethanol | 603-002-00-5 | 64-17-5 | 200-578-6 | | | |
| Isopropanol (Propan-2-ol) | 603-117-00-0 | 67-63-0 | 200-661-7 | | | Flam. Liq. 2: H225; Eye Irrit. 2: H319; STOT SE 3: H336; |
| Ethyl Polysilicate | | 11099-06-2 | | | | Flam. Liq. 3: H226; Eye Irrit. 2: H319; |
| Methanol | 603-001-00-X | 67-56-1 | 200-659-6 | | | Flam. Liq. 2: H225; Acute Tox. 3: H331; Acute Tox. 3: H311; Acute Tox. 3: H301; STOT SE 1: H370; |
| Isobutyl methyl ketone (4-Methylpentan-2-one) | 606-004-00-4 | 108-10-1 | 203-550-1 | | | Flam. Liq. 2: H225; Acute Tox. 4: H332; Eye Irrit. 2: H319; STOT SE 3: H335; |

Further information

Full text for all Risk Phrases mentioned in this section are displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------|---|
| Inhalation | Move the exposed person to fresh air. Seek medical attention. |
| Eye contact | Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention if irritation or symptoms persist. |
| Skin contact | Wash off immediately with plenty of soap and water. Remove contaminated clothing. Seek medical attention if irritation or symptoms persist. |
| Ingestion | Seek medical attention if irritation or symptoms persist. DO NOT INDUCE VOMITING. |

4.2. Most important symptoms and effects, both acute and delayed

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Revision date 2021-08-03**4.2. Most important symptoms and effects, both acute and delayed**

| | |
|--------------|--|
| Inhalation | Harmful by inhalation. Irritant, moderate respiratory. Inhalation may cause nausea and vomiting. |
| Eye contact | Irritant, moderate eye. |
| Skin contact | Irritating to skin. |
| Ingestion | Repeated or prolonged exposure may cause damage to liver, kidneys and central nervous system. Suspected of causing cancer methyl Isobutyl Ketone. MAY BE FATAL IF SWALLOWED. |

4.3. Indication of any immediate medical attention and special treatment needed

| | |
|-----------|---|
| Ingestion | Seek medical attention if irritation or symptoms persist. |
|-----------|---|

SECTION 5: Firefighting measures**5.1. Extinguishing media**

| | |
|--|--|
| | Use as appropriate: Water spray. Dry chemical. Carbon dioxide (CO2). Alcohol resistant foam. |
|--|--|

5.2. Special hazards arising from the substance or mixture

| | |
|--|---|
| | . |
|--|---|

5.3. Advice for firefighters

| | |
|--|---|
| | Cool fire exposed containers with waterspray. Self-contained breathing apparatus. Wear protective clothing. In use may form flammable/explosive vapour-air mixture. Vapours are heavier than air. Vapour may travel considerable distance to source of ignition and flash back. Risk of explosion if heated under confinement. Burning produces irritating, toxic and obnoxious fumes. |
|--|---|

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

| | |
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| | Ensure adequate ventilation of the working area. Wear suitable protective equipment. Eliminate all sources of ignition. Evacuate personnel to a safe area. |
|--|--|

6.2. Environmental precautions

| | |
|--|--|
| | Do not allow product to enter drains. Prevent further spillage if safe. report releases required by. local and national regulations. |
|--|--|

6.3. Methods and material for containment and cleaning up

| | |
|--|---|
| | Absorb with inert, absorbent material. Sweep up. Transfer to suitable, labelled containers for disposal. Clean spillage area thoroughly with plenty of water. |
|--|---|

6.4. Reference to other sections

| | |
|--|--|
| | See section [2, 8 & 13] for further information. |
|--|--|

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

| | |
|--|--|
| | Avoid contact with eyes and skin. Avoid breathing dust/fume/gas/mist/vapours/spray. Wear protective clothing. Wash hands after handling the product. Ensure adequate ventilation of the working area. Keep away from sources of ignition - No smoking. Use explosion proof equipment. Ground/bond container and receiving equipment. Do NOT reuse empty containers. Once the product residues adhering to the walls of the containers have been rendered harmless, the product and hazard labels must be invalidated. |
|--|--|

7.2. Conditions for safe storage, including any incompatibilities

| | |
|--|--|
| | Keep in a cool, dry, well ventilated area. Keep containers tightly closed. Store in correctly labelled containers. |
|--|--|

7.3. Specific end use(s)

| | |
|--|-----------------------------------|
| | Restricted to professional users. |
|--|-----------------------------------|

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SECTION 8: Exposure controls/personal protection**8.1. Control parameters**

exposure limits: Ethyl Silicate - 100 ppm TWA OSHA PEL, 10 ppm TWA ACGIH.
 exposure limits: Ethanol - 1000 ppm TWA OSHA PEL, 1000 ppm STEL ACGIH TLV.
 exposure limits: Isopropanol - 400 ppm OSHA PEL, 200 ppm TWA & 400 ppm STEL ACGIH TLV.
 exposure limits: Methanol - 200 ppm OSHA PEL, 200 ppm TWA & 250 ppm STEL ACGIH TLV (skin).
 exposure limits: Methyl Isobutyl Ketone - 100 ppm OSHA PEL, 20 ppm TWA & 75 ppm STEL ACGIH TLV.

8.1.1. Exposure Limit Values

| | | |
|--|---|--|
| Ethanol | WEL 8-hr limit ppm: 1000 WEL 15 min limit ppm: - WEL 8-hr limit mg/m3 total - inhalable dust: WEL 8-hr limit mg/m3 total - respirable dust: | WEL 8-hr limit mg/m3: 1920 WEL 15 min limit mg/m3: - WEL 15 min limit mg/m3 total - inhalable dust: WEL 15 min limit mg/m3 total - respirable dust: |
| Isobutyl methyl ketone (4-Methylpentan-2-one) | WEL 8-hr limit ppm: 50 WEL 15 min limit ppm: 100 WEL 8-hr limit mg/m3 total - inhalable dust: WEL 8-hr limit mg/m3 total - respirable dust: | WEL 8-hr limit mg/m3: 208 WEL 15 min limit mg/m3: 416 WEL 15 min limit mg/m3 total - inhalable dust: WEL 15 min limit mg/m3 total - respirable dust: |
| Isopropanol (Propan-2-ol) | WEL 8-hr limit ppm: 400 WEL 15 min limit ppm: 500 WEL 8-hr limit mg/m3 total - inhalable dust: WEL 8-hr limit mg/m3 total - respirable dust: | WEL 8-hr limit mg/m3: 999 WEL 15 min limit mg/m3: 1250 WEL 15 min limit mg/m3 total - inhalable dust: WEL 15 min limit mg/m3 total - respirable dust: |
| Methanol | WEL 8-hr limit ppm: 200 WEL 15 min limit ppm: 250 WEL 8-hr limit mg/m3 total - inhalable dust: WEL 8-hr limit mg/m3 total - respirable dust: | WEL 8-hr limit mg/m3: 266 WEL 15 min limit mg/m3: 333 WEL 15 min limit mg/m3 total - inhalable dust: WEL 15 min limit mg/m3 total - respirable dust: |
| Tetraethyl silicate (Tetraethyl orthosilicate) | DIR: 2017/164 8hTWA ppm: 5 STEL ppm: - | 8hTWA mg/m3: 44 STEL mg/m3: - NOT: - |

8.2. Exposure controls

| | |
|---|--|
| 8.2.1. Appropriate engineering controls | Ensure adequate ventilation of the working area. |
| 8.2.2. Individual protection measures | Wear chemical protective clothing. |
| Eye / face protection | Approved safety goggles. |
| Skin protection - Handprotection | Chemical resistant gloves (PVC). |
| Respiratory protection | Not normally required. In case of insufficient ventilation, wear suitable respiratory equipment. |

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

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9.1. Information on basic physical and chemical properties

| | |
|---------------------------|---------------------------------------|
| Appearance | Liquid |
| Colour | Clear |
| Odour | Alcoholic |
| Upper Explosive Limit | 36 % |
| Lower Explosive Limit | 1.2 % |
| Freezing Point | No data available |
| Decomposition temperature | No data available |
| Viscosity | No data available |
| Oxidising properties | No data available |
| Odour threshold | No data available |
| pH | No data available |
| Fat Solubility | No data available |
| Partition coefficient | No data available |
| Vapour Flammability | No data available |
| Autoignition temperature | > 360 °C |
| Initial boiling point | = 79.7 °C |
| Flash point | = 6 °C |
| Evaporation rate | = 2.6 |
| Vapour pressure | = 1700 Pa |
| Vapour density | = 8.2 |
| Relative density | = 0.87 (H ₂ O = 1 @ 20 °C) |
| Flammability (solid, gas) | Not applicable. |
| Melting point | Not applicable. |

9.2. Other information

| | |
|----------------------------------|-------------------|
| SADT | No data available |
| Conductivity | No data available |
| Surface tension | No data available |
| Gas group | No data available |
| VOC (Volatile organic compounds) | No data available |
| Benzene Content | Not applicable. |
| Lead content | Not applicable. |

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization is not expected to occur.

10.4. Conditions to avoid

Heat, sparks and open flames.

10.5. Incompatible materials

Avoid contact with: Acids, Oxidising agents, Alkalis.

10.6. Hazardous decomposition products

Carbon oxides, silicon dioxide may be formed in fire conditions.

SECTION 11: Toxicological information

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11.1. Information on toxicological effects

| | |
|-----------------------------------|--|
| Acute toxicity | Harmful by inhalation. Inhalation is irritating to the respiratory tract and may cause damage to the central nervous system. Inhalation may cause nausea and vomiting. Inhalation may cause coughing, tightness of the chest and irritation of the respiratory system. |
| | Ingestion is irritating to the respiratory tract and may cause damage to the central nervous system. Ingestion may cause nausea and vomiting. |
| Skin corrosion/irritation | Prolonged or repeated exposure may cause irritation to skin and mucous membranes. |
| Serious eye damage/irritation | Eyes: Contact may cause irritation with redness and tearing. |
| Respiratory or skin sensitisation | No Significant Hazard. |
| Germ cell mutagenicity | Adverse mutagenic and teratogenic effects have been found in laboratory animals. |
| Carcinogenicity | Methyl Isobutyl Ketone may be a. CANCER HAZARD (CONTAINS MATERIAL WHICH) CAN CAUSE CANCER. |
| STOT-single exposure | May cause damage to human organs based on animal data. |
| STOT-repeated exposure | May cause damage to human organs based on animal data. |
| Aspiration hazard | Based on available data, the classification criteria are not met. |

11.1.4. Toxicological Information

| | | |
|----------|--|-------------------------|
| Methanol | Oral Rat LD50: 100 Inhalation Rat LC50/4 h: 3 | Dermal Rabbit LD50: 300 |
|----------|--|-------------------------|

SECTION 12: Ecological information

12.1. Toxicity

| | | |
|----------|--------------------------------|----------------------|
| Methanol | Fish LC50/96h: 15400.0000 mg/l | Algae EC50/120h: 530 |
|----------|--------------------------------|----------------------|

12.2. Persistence and degradability

| | |
|--|---|
| | has an atmospheric half life of about 16 hours. |
|--|---|

12.3. Bioaccumulative potential

| | |
|--|-------------------------------|
| | Lowest observed effect level. |
|--|-------------------------------|

Partition coefficient

| | |
|--|---|
| | Chromex(TM) Binder A [EU] No data available |
|--|---|

12.4. Mobility in soil

| | |
|--|------------------------------|
| | very high mobility in soils. |
|--|------------------------------|

12.5. Results of PBT and vPvB assessment

| | |
|--|-----------------|
| | Not applicable. |
|--|-----------------|

SECTION 13: Disposal considerations

General information

| | |
|--|---|
| | Dispose of in compliance with all local and national regulations. |
|--|---|

Disposal of packaging

| | |
|--|--|
| | Do NOT reuse empty containers. Once the product residues adhering to the walls of the containers have been rendered harmless, the product and hazard labels must be invalidated. |
|--|--|

SECTION 14: Transport information

Hazard pictograms

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Hazard pictograms



14.1. UN number

UN1993

14.2. UN proper shipping name

FLAMMABLE LIQUID, N.O.S. (Ethanol, Isopropanol)

14.3. Transport hazard class(es)

| | |
|-----------------|---|
| ADR/RID | 3 |
| Subsidiary risk | - |
| IMDG | 3 |
| Subsidiary risk | - |
| IATA | 3 |
| Subsidiary risk | - |

14.4. Packing group

| | |
|---------------|----|
| Packing group | II |
|---------------|----|

14.5. Environmental hazards

| | |
|-----------------------|----|
| Environmental hazards | No |
| Marine pollutant | No |

ADR/RID

| | |
|-----------------|-------|
| Hazard ID | 33 |
| Tunnel Category | (D/E) |

IMDG

| | |
|----------|---------|
| EmS Code | F-E S-E |
|----------|---------|

IATA

| | |
|---------------------------------|------|
| Packing Instruction (Cargo) | 364 |
| Maximum quantity | 60 L |
| Packing Instruction (Passenger) | 353 |
| Maximum quantity | 5 L |

SECTION 15: Regulatory information

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

| | |
|-------------|--|
| Regulations | <p>COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.</p> <p>REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.</p> |
|-------------|--|

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15.2. Chemical safety assessment

| | |
|--|---------------------------------------|
| | No data is available on this product. |
|--|---------------------------------------|

SECTION 16: Other information

Other information

| | |
|---|--|
| Revision | This document differs from the previous version in the following areas: 15 - Regulations. |
| Text of Hazard Statements in Section 3 | Flam. Liq. 3: H226 - Flammable liquid and vapour. Eye Irrit. 2: H319 - Causes serious eye irritation. Acute Tox. 4: H332 - Harmful if inhaled. STOT SE 3: H335 - May cause respiratory irritation. Flam. Liq. 2: H225 - Highly flammable liquid and vapour. STOT SE 3: H336 - May cause drowsiness or dizziness. Flam. Liq. 1: H224 - Extremely flammable liquid and vapour. Acute Tox. 3: H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled STOT SE 1: H370 - Causes damage to organs . STOT SE 2: H371 - May cause damage to organs . EUH066 - Repeated exposure may cause skin dryness or cracking. |

Further information

| | |
|--|--|
| | The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. |
|--|--|