

HYDRANAL[™]Coulomat CG

| 1840-30IVIL | | |
|---|---|---------------------------|
| ersion 1.2 | Revision Date 03/02/2020 | Print Date 05/12/20 |
| ECTION 1. IDENTIFICATION | | |
| Product name | : HYDRANAL™Coulomat CG | |
| FIDUUCI Hame | | |
| Number | : 00000020625 | |
| Product Use Description | : Scientific research and developmen | ıt |
| | : Honeywell International Inc. | |
| details | 1953 South Harvey Street Muskegon, MI 49442 | |
| For more information call | : 1-800-368-0050 | |
| | +1-231-726-3171(Monday-Friday, 9 | :00am-5:00pm) |
| In case of emergency call | Medical: 1-800-498-5701 or +1-303 Transportation (CHEMTREC): 1-8 +1-703-527-3887 | |
| | : : (24 hours/day, 7 days/week) | |
| | | |
| ECTION 2. HAZARDS IDENTIFI | | |
| Emergency Overview | | |
| Form | : liquid | |
| Color | : light yellow | |
| | | |
| Odor | : aromatic | |
| | | |
| Classification of the substa | | |
| Classification of the substance or mixture | e : Flammable liquids, Category 2 Skin irritation, Category 2 | |
| of mixture | Eye irritation, Category 2A | |
| | Specific target organ toxicity - sing | gle exposure, Category 1, |
| | Eyes, Nervous system, Systemic | toxicity |
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34840-50ML Version 1.2 Revision Date 03/02/2020 Print Date 05/12/2023 GHS Label elements, including precautionary statements Symbol(s) Signal word : Danger Hazard statements : Highly flammable liquid and vapour. Causes skin irritation. Causes serious eye irritation. Causes damage to organs. : Prevention: Precautionary statements Keep away from heat/ sparks/ open flames/ hot surfaces. No smokina. 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. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. **Response:** IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed: Call a POISON CENTER or doctor/ physician. If skin irritation occurs: Get medical advice/ attention. If eye irritation persists: Get medical advice/ attention. Take off contaminated clothing and wash before reuse. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction. Storage: Store in a well-ventilated place. Keep cool. Store locked up. Page 2 / 15



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Version 1.2 Revision Date 03/02/2020 Print Date 05/12/2023 Disposal: Dispose of contents/ container to an approved waste disposal plant. Carcinogenicity No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA. SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS Chemical nature : Mixture Chemical name CAS-No. Concentration Diethanolamine hydrochloride 14426-21-2 >=50.00 - <70.00 % Methanol >=30.00 - <50.00 % 67-56-1 Ethanol, 2,2'-iminobis-, hydriodide 134227-25-1 >=1.00 - <=5.00 % Sulphur dioxide 7446-09-5 >=1.00 - <5.00 % SECTION 4. FIRST AID MEASURES General advice : First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately. : Move to fresh air. Keep patient warm and at rest. Call a Inhalation physician immediately. Skin contact : Wash off immediately with plenty of water. If skin irritation persists, call a physician. In the case of contact with eyes, rinse immediately with plenty of Eye contact water and seek medical advice. Protect unharmed eye. Page 3 / 15



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| Ingestion | | en swallowed, allow water to be iting. Call a physician immediate | |
| Notes to physician | | | |
| Most important symptoms/effects, acute and | : No | information available. | |
| delayed Indication of immediate medical attention and special treatment needed, if necessary | : Trea | at symptomatically. | |
| CTION 5. FIREFIGHTING MEA | SURES | | |
| Suitable extinguishing media | Fo: Ca | ater spray am rbon dioxide (CO2) / powder | |
| Unsuitable extinguishing media | : Do fire | not use a solid water stream as | it may scatter and spread |
| Specific hazards during firefighting | Va Va ign In o Pro Ca Ca nitr Su | mmable. pours may form explosive mixtu pours are heavier than air and n pors may travel to areas away fr iting/flashing back to vapor sour case of fire hazardous decompo iduced such as: rbon monoxide rbon dioxide (CO2) rogen oxides (NOx) lphur oxides drogen halides | nay spread along floors. rom work site before ce. |
| Special protective equipment for firefighters | | ear an approved positive pressur paratus in addition to standard fi | |
| Further information | | e extinguishing measures that a cumstances and the surrounding | |
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SECTION 6. ACCIDENTAL RELEASE MEASURES

| Personal precautions, protective equipment and emergency procedures | : | Evacuate personnel to safe areas. Wear personal protective equipment. Unprotected persons must be kept away. Ensure adequate ventilation. Remove all sources of ignition. |
|---|----|--|
| Environmental precautions | : | Should not be released into the environment. |
| Methods and materials for containment and cleaning up | : | Ventilate the area. No sparking tools should be used. Use explosion-proof equipment. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). |
| TION 7. HANDLING AND ST Handling | OR | RAGE |
| nananng | | |
| Precautions for safe handling | : | Wear personal protective equipment. Use only in well-ventilated areas. |
| Advice on protection against fire and explosion | : | Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. The heavy vapours can overcome a considerable distance up to the source of ignition. Vapours may form explosive mixtures with air. |
| Storage | | |
| Conditions for safe storage, including any incompatibilities | : | Keep only in the original container, tightly closed, in a well ventilated place. Store at room temperature. (Ambient temperature: > 0 < 35°C) Protect from atmospheric moisture and water. |
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| Advice on common storage | : | Do not store together with: Oxidizing agents | | |
| SECTION 8. EXPOSURE CONTI | ROL | S/PERSONAL PROTECTION | | |
| Protective measures | : | Ensure that eyewash stations and safety showers are close the workstation location. Legal requirements are to be considered in regard of the selection, use and care of personal protective equipment. Do not breathe vapours or spray mist. | | |
| Engineering measures | : | Use with local exhaust ventilation. Prevent vapour buildup by providing a and after use. | adequate ventilation during | |
| Eye protection | : | Safety goggles | | |
| Hand protection | : | Impervious butyl rubber gloves Gloves must be inspected prior to use. Replace when worn. | | |
| Skin and body protection | : | Protective suit | | |
| Respiratory protection | : | In case of insufficient ventilation, wea | ar suitable respiratory | |

Hygiene measures : General industrial hygiene practice.

equipment.

Exposure Guidelines

| Methanol67-56-1SKIN_DE S : Skin designati on:Can be absorbed through the skin.2008 Threshold Lin Values, as an Values, as an | CGIH |
|---|------|
| | nit |
| Methanol 67-56-1 STEL : (250 ppm) 2008 ACGIH:US. A Short term exposure limit | nit |



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|----------|---------|--|--|------------|---|
| Methanol | 67-56-1 | TWA : Time weighted average | (200 ppm) | 2008 | ACGIH:US. ACGIH Threshold Limit Values, as amended |
| Methanol | 67-56-1 | STEL : Short term exposure limit | 325 mg/m3 (250 ppm) | 2005 | NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended |
| Methanol | 67-56-1 | SKIN_DE S : Skin designati on: | Can be absorbed through the skin. | 2005 | NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended |
| Methanol | 67-56-1 | REL : Recomm ended exposure limit (REL): | 260 mg/m3 (200 ppm) | 2005 | NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended |
| Methanol | 67-56-1 | PEL : Permissi ble exposure limit | 260 mg/m3 (200 ppm) | 02 2006 | OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended |
| Methanol | 67-56-1 | SKIN_FI NAL : Skin designati on (Final Rule Limit applies): | Can be absorbed through the skin. | 1989 | Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended |
| | | | | | |



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| Methanol | 67-56-1 | STEL : Short term exposure limit | 325 mg/m3 (250 ppm) | 1989 | Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended |
| Methanol | 67-56-1 | TWA : Time weighted average | 260 mg/m3 (200 ppm) | 1989 | Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended |
| Sulphur dioxide | 7446-09-5 | STEL : Short term exposure limit | (0.25 ppm) | 2009 | ACGIH:US. ACGIH Threshold Limit Values, as amended |
| Sulphur dioxide | 7446-09-5 | STEL : Short term exposure limit | 13 mg/m3 (5 ppm) | 2005 | NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended |
| Sulphur dioxide | 7446-09-5 | REL : Recomm ended exposure limit (REL): | 5 mg/m3 (2 ppm) | 2005 | NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended |
| Sulphur dioxide | 7446-09-5 | PEL : Permissi ble exposure limit | 13 mg/m3 (5 ppm) | 02 2006 | OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended |



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| Sulphur dioxide | 7446-09-5 | STEL : Short term exposure limit | 13 mg/m3 (5 ppm) | 1989 | Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended |
| Sulphur dioxide | 7446-09-5 | TWA : Time weighted average | 5 mg/m3 (2 ppm) | 1989 | Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended |
| TION 9. PHYSICAL AN | | | IES | | |
| Physical state | : liqu | | | | |
| Color | : ligh | nt yellow | | | |
| Odor | : arc | matic | | | |
| Odor threshold | : No | te: no data a | | | |
| рН | : 4.0 | 0 - 7.0 at , 20 | О° (| | |
| Melting point/range | : No | te: no data a | vailable | | |
| Boiling point/boiling rang | e : 63 | °C at 1,013 | hPa | | |
| Flash point | : 57 | °F (14 °C) | | | |
| Evaporation rate | : No | te: no data a | vailable | | |
| Lower explosion limit | : No | te: no data a | vailable | | |
| Upper explosion limit | : No | te: no data a | vailable | | |
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| Vapor pressure | : | Note: no data available | |
| Vapor density | : | Note: no data available | |
| Density | : | 1.064 g/cm3 at 20 °C | |
| Water solubility | : | Note: completely miscible | |
| Partition coefficient: n-octanol/water | : | Note: no data available | |
| Ignition temperature | : | Note: no data available | |
| Decomposition temperature | : | Note: No decomposition if used as dir | ected. |
| Viscosity, dynamic | : | Note: no data available | |
| Viscosity, kinematic | : | Note: no data available | |
| CTION 10. STABILITY AND R Reactivity | | TIVITY Not classified as a reactivity hazard. | |
| | | Stable under recommended storage c | |
| Chemical stability | · | | conditions. |
| Chemical stability Possibility of hazardous reactions | | Vapours may form explosive mixture v Hazardous polymerisation does not of | with air. |
| Possibility of hazardous | : | Vapours may form explosive mixture | with air. ccur. |
| Possibility of hazardous reactions | : | Vapours may form explosive mixture v Hazardous polymerisation does not of Protect from atmospheric moisture an | with air. ccur. |
| Possibility of hazardous reactions Conditions to avoid | : | Vapours may form explosive mixture of Hazardous polymerisation does not of Protect from atmospheric moisture an Heat, flames and sparks. | with air. ccur. d water. |

| AFETY DATA SHEET | | Honeywell Fluka |
|---|---|----------------------|
| YDRANAL™Couloma | it CG | |
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| | Carbon monoxide Carbon dioxide (CO2) nitrogen oxides (NOx) Sulphur oxides Hydrogen halides | |
| ECTION 11. TOXICOLOGICAL Acute oral toxicity | : LD50: > 2,000 mg/kg | |
| | Species: Rat Method: OECD Test Guideline 401 | |
| Acute inhalation toxicity Methanol | : LC50: 64000 ppm Exposure time: 4 h Species: Rat | |
| Acute dermal toxicity Methanol | : LD50: 15,800 mg/kg Species: Rabbit | |
| Repeated dose toxicity Methanol | : Species: Rat Application Route: Inhalation Test substance: Methanol Developmental Toxicity NOAEL (maternal toxicity) 10,000 ppm NOAEL (developmental toxicity) 5,000 ppm Skeletal and visceral malformations. | |
| Genotoxicity in vitro Methanol | : Note: In vitro tests did not show muta | genic effects. |
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Honeywell SAFETY DATA SHEET Fluka HYDRANAL[™]Coulomat CG 34840-50ML Version 1.2 Revision Date 03/02/2020 Print Date 05/12/2023 Genotoxicity in vivo Methanol : Note: In vivo tests did not show mutagenic effects **SECTION 12. ECOLOGICAL INFORMATION Ecotoxicity effects** Toxicity to fish : semi-static test LC50: > 1,000 mg/l Exposure time: 96 h Species: Leuciscus idus (Golden orfe) Method: OECD Test Guideline 203 : NOEC: > 1,000 mg/l Species: Leuciscus idus (Golden orfe) Method: OECD Test Guideline 203 Toxicity to daphnia and other aquatic invertebrates Methanol : LC50: 10,000 mg/l Exposure time: 24 h Species: Daphnia (water flea) Toxicity to bacteria : Growth inhibition LC0: 275 mg/l Species: Pseudomonas putida Further information on ecology SECTION 13. DISPOSAL CONSIDERATIONS Disposal methods : Observe all Federal, State, and Local Environmental regulations. SECTION 14. TRANSPORT INFORMATION Page 12 / 15



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|--------------------------------------|---|--|--------------------|
| DOT | UN/ID No. Proper shipping name Class Packing group Hazard Labels | : UN 1230 : METHANOL SOLUTION 3 II 3 | |
| ΙΑΤΑ | UN/ID No. Description of the good Class Packaging group Hazard Labels Packing instruction (ca aircraft) Packing instruction (passenger aircraft) Packing instruction (passenger aircraft) | : 3 : II : 3 (6.1) | |
| IMDG | UN/ID No. Description of the good Class Packaging group Hazard Labels EmS Number Marine pollutant | : UN 1230 S : METHANOL SOLUTION : 3 : II : 3 (6.1) : F-E, S-D : no | |
| TION 15. | REGULATORY INFORM | ATION | |
| Inventori | es | | |
| US. Toxic Control A China. Inv | c Substances : A ct T ex | I chemical substances in this product are SCA Inventory or are in compliance with a cemption. In the inventory, or in compliance with the | a TSCA Inventory |
| Note | co in | ote: Because of the potential specific inve omponents of this product line, further, mo formation can be requested from afetyDataSheet@Honeywell.com. | |
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| National regulatory informa | tion | | | |
| | : This material must be used in (| compliance with the TSCA | | |
| TSCA | | Research and Development Exemption requirements (40 CFR | | |
| US. EPA CERCLA Hazardous Substances (40 CFR 302) | : The following component(s) of release reporting under 40 CFI Reportable Quantity (RQ): | this product is/are subject to R 302 when release exceeds the | | |
| | Reportable quantity: 5000 lbs | | | |
| | : Methanol | 67-56-1 | | |
| | Reportable quantity: 500 lbs Sulphur dioxide | 7446-09-5 | | |
| SARA 302 Components | : The following components are | | | |
| | established by SARA Title III, \$: Sulphur dioxide | Section 302: 7446-09-5 | | |
| | · | | | |
| SARA 313 Components | : The following components are established by SARA Title III, \$ | | | |
| | : Methanol | 67-56-1 | | |
| SARA 311/312 Hazards | : Fire Hazard Acute Health Hazard Chronic Health Hazard | | | |
| California Prop. 65 | : 🛦 | | | |
| | listed below, known to the Stat defects or other reproductive h | can expose you to chemicals, e of California to cause birth arm. For more information go to | | |
| | www.P65Warnings.ca.gov. Sulphur dioxide | 7446-09-5 | | |
| | Methanol | 67-56-1 | | |
| Massachusetts RTK | : Methanol | 67-56-1 | | |
| | : Sulphur dioxide | 7446-09-5 | | |
| New Jersey RTK | : Methanol : Sulphur dioxide | 67-56-1 7446-09-5 | | |
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SAFETY DATA SHEET

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|------------------------|------------------------------|-----------|-----------------------|--|
| Pennsylvania RTK | : Methanol : Sulphur diox | ide | 67-56-1 7446-09-5 | |
| | | | | |
| SECTION 16. OTHER INFO | | ΝΕΡΔ | | |
| SECTION 16. OTHER INFO | RMATION HMIS III : 2* | NFPA 2 | | |
| | HMIS III | | | |

Honeywell

Fluka"

* - Chronic health hazard

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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 process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Previous Issue Date: 08/20/2018

Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group

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