

SAFETY DATA SHEET

1. Identification

Product identifier **CIMGUARD® R562**
CORROSION INHIBITOR

Other means of identification

SDS No. Not applicable

Recommended use of the chemical and restrictions on use

Recommended use CORROSION INHIBITOR

Restrictions on use Not available.

Details of manufacturer or importer

Manufacturer

Company name CIMCOOL® Korea Inc
Address 255, Gongdan-ro, Onsan-eup, Ulju-gun, Ulsan, Korea

Telephone +82-52-239-2333

Emergency telephone number (Korea CHEMTREC) 003-0813-2549

Importer / Supplier

Company name CIMCOOL® Korea Inc
Address C/- DuBois Chemicals Australia Pty Ltd
305 Frankston Dandenong Road
Dandenong South VIC 3175
Australia

Telephone (General Information) + 61 3 9768 3860

Emergency Telephone Number (Australia) 131 126 (Poison Information Centre)

Emergency Telephone Number (Australia CHEMTREC) + 61 2 9037 2994

2. Hazard(s) identification

Classification of the hazardous chemical

Physical hazards Corrosive to metals Category 1

Health hazards Acute toxicity, oral Category 4

Skin irritation Category 2

Serious eye irritation Category 2

Environmental hazards Not classified.

Label elements, including precautionary statements

Hazard symbol(s)



Corrosion Exclamation mark

Signal word Warning

Hazard statement(s) May be corrosive to metals. Harmful if swallowed. Causes skin irritation. Causes serious eye irritation.

Precautionary statement(s)

| | |
|-------------------|---|
| Prevention | Keep only in original container. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear eye protection/face protection. Wear protective gloves. |
| Response | IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. Absorb spillage to prevent material damage. |
| Storage | Store in corrosive resistant container with a resistant inner liner. |
| Disposal | Dispose of contents/container in accordance with local/regional/national/international regulations. |

Other hazards which do not result in classification None known.

Supplemental information 15% of the mixture consists of component(s) of unknown acute inhalation toxicity. 5% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 5% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

Mixture

| Identity of chemical ingredients | CAS number and other unique identifiers | Concentration of ingredients |
|--|---|------------------------------|
| MONOETHANOLAMINE | 141-43-5 | 5 - < 10 |
| Other components below reportable levels | | 90 - 100 |

The exact percentages of hazardous ingredients have been withheld as a trade secret.

4. First-aid measures

Description of necessary first aid measures

| | |
|---------------------|---|
| Inhalation | Move to fresh air. Call a physician if symptoms develop or persist. Under normal conditions of intended use, this material is not expected to be an inhalation hazard. |
| Skin contact | Rinse skin with water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. |
| Eye contact | Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. |
| Ingestion | Rinse mouth thoroughly. Drink 1 or 2 glasses of water. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell. |

Personal protection for first-aid responders If exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.

Symptoms caused by exposure Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation.

Medical attention and special treatment Provide general supportive measures and treat symptomatically. Symptoms may be delayed.

5. Fire-fighting measures

Extinguishing media

| | |
|---------------------------------------|--|
| Suitable extinguishing media | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂). Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media | Not applicable, non-combustible. |

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for fire fighters Wear suitable protective equipment.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk.

Hazchem code 2X

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials. In the event of fire and/or explosion do not breathe fumes.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

For emergency responders Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

Methods and materials for containment and cleaning up Local authorities should be advised if significant spillages cannot be contained. This product is miscible in water. Prevent entry into waterways, sewer, basements or confined areas. Clean up in accordance with all applicable regulations.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb spillage to prevent material damage. 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: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

7. Handling and storage

Precautions for safe handling Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid breathing mist/vapors. Avoid prolonged exposure. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store in a cool, dry place out of direct sunlight. Store in corrosive resistant container with a resistant inner liner. Store in tightly closed container. Keep only in the original container. If frozen, product may separate. Thaw completely at room temperature and stir thoroughly prior to use. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls and personal protection

Control parameters Follow standard monitoring procedures.

Occupational exposure limits

Australia. National Workplace OELs (Workplace Exposure Standards for Airborne Contaminants, Appendix A)

| Components | Type | Value |
|------------------------------------|------|--------------------------------|
| MONOETHANOLAMINE (CAS 141-43-5) | STEL | 15 mg/m ³ |
| | | 6 ppm |
| | TWA | 7.5 mg/m ³ 3 ppm |

US. ACGIH Threshold Limit Values

| Components | Type | Value |
|------------------------------------|------|-------|
| MONOETHANOLAMINE (CAS 141-43-5) | STEL | 6 ppm |
| | TWA | 3 ppm |

UK. EH40 Workplace Exposure Limits (WELs)

| Components | Type | Value |
|------------------------------------|------|--------------------------------|
| MONOETHANOLAMINE (CAS 141-43-5) | STEL | 7.6 mg/m ³ |
| | | 3 ppm |
| | TWA | 2.5 mg/m ³ 1 ppm |

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

| Components | Type | Value | Form |
|------------------------------------|------|------------------------|--------------------|
| MONOETHANOLAMINE (CAS 141-43-5) | TWA | 0.51 mg/m ³ | Vapor and aerosol. |
| | | 0.2 ppm | Vapor and aerosol. |

| | |
|--|--|
| Biological limit values | No biological exposure limits noted for the ingredient(s). |
| Appropriate engineering controls | 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, for example personal protective equipment (PPE) | |
| Eye/face protection | Do not get in eyes. Wear safety glasses with side shields (or goggles). Eye wash fountain is recommended. |
| Skin protection | |
| Hand protection | Nitrile gloves are recommended. |
| Other | Wear appropriate chemical resistant clothing. |
| Respiratory protection | In case of insufficient ventilation, wear suitable respiratory equipment. |
| Thermal hazards | Wear appropriate thermal protective clothing, when necessary. |
| Hygiene measures | When using, do not eat, drink or smoke. Do not get in eyes, on skin, on clothing. 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 | CLEAR |
| Physical state | Liquid. |
| Form | Liquid. |
| Color | Not available. |
| Odor | CHEMICAL |
| Odor threshold | Not available. |
| pH | 10.9 |
| Melting point/freezing point | 32 °F (0 °C) estimated |
| Initial boiling point and boiling range | 212 °F (100 °C) estimated |
| Flash point | Not Applicable |
| Evaporation rate | Like water when diluted |
| 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) | 100 % Water Miscible |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not available. |

Decomposition temperature Not available.

Viscosity Not available.

Other physical and chemical parameters

Explosive properties Not explosive.

Oxidizing properties Not oxidizing.

pH in aqueous solution 9.5 @ 2%

Specific gravity 1.110

10. Stability and reactivity

Reactivity May be corrosive to metals.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

Conditions to avoid Contact with incompatible materials.

Incompatible materials Acids. Oxidizing agents. Aluminum. Do not add sodium nitrite or other nitrosating agents which may form cancer causing nitrosamines.

Hazardous decomposition products Smoke, fumes, oxides of nitrogen, and oxides of carbon

11. Toxicological information

Information on possible routes of exposure

Inhalation May cause irritation to the respiratory system.

Skin contact Causes skin irritation.

Eye contact Causes serious eye irritation.

Ingestion Harmful if swallowed.

Symptoms related to exposure Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Direct contact with eyes may cause temporary irritation. Skin irritation.

Acute toxicity

| Components | Species | Test Results |
|------------|---------|--------------|
|------------|---------|--------------|

MONOETHANOLAMINE (CAS 141-43-5)

Acute

Dermal

| | | |
|------|--------|------------|
| LD50 | Rabbit | 1025 mg/kg |
|------|--------|------------|

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/irritation Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful. May be harmful if absorbed through skin.

Other information The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

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 | |
| MONOETHANOLAMINE (CAS 141-43-5) | | | |
| Aquatic | | | |
| Fish | LC50 | Rainbow trout,donaldson trout (Oncorhynchus mykiss) | 114 - 196 mg/l, 96 hours |
| Acute | | | |
| Crustacea | EC50 | Daphnia | 65 mg/l, 48 hours ECHA |
| Persistence and degradability | No data is available on the degradability of this product. | | |
| Bioaccumulative potential | | | |
| Partition coefficient n-octanol / water (log Kow) | | | |
| MONOETHANOLAMINE | | -1.31 | |
| Mobility in soil | This product is miscible in water. | | |
| Other adverse effects | No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component. | | |

13. Disposal considerations

| | |
|-------------------------------|--|
| Disposal methods | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations. |
| Residual waste | 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

ADG

| | |
|-------------------------------------|---|
| UN number | 3267 |
| UN proper shipping name | CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (MONOETHANOLAMINE) |
| Transport hazard class(es) | |
| Class | 8 |
| Subsidiary risk | - |
| Packing group | III |
| Environmental hazards | No. |
| Hazchem code | 2X |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |

RID

| | |
|-------------------------------------|---|
| UN number | 3267 |
| UN proper shipping name | CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (MONOETHANOLAMINE) |
| Transport hazard class(es) | |
| Class | 8 |
| Subsidiary risk | - |
| Label(s) | 8 |
| Packing group | III |
| Environmental hazards | No. |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |

IATA

| | |
|-----------------------------------|---|
| UN number | 3267 |
| UN proper shipping name | Corrosive liquid, basic, organic, n.o.s. (MONOETHANOLAMINE) |
| Transport hazard class(es) | |
| Class | 8 |
| Subsidiary risk | - |
| Packing group | III |
| Environmental hazards | No. |

ERG Code 8L
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Other information

Passenger and cargo aircraft Allowed with restrictions.

Cargo aircraft only Allowed with restrictions.

IMDG

UN number 3267

UN proper shipping name CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (MONOETHANOLAMINE)

Transport hazard class(es)

Class 8

Subsidiary risk -

Packing group III

Environmental hazards

Marine pollutant No.

EmS F-A, S-B

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.

ADG



IATA; IMDG; RID



15. Regulatory information

Safety, health and environmental regulations

National regulations

This Safety Data Sheet was prepared in accordance with Australia Model Code of Practice for the preparation of Safety Data Sheets for Hazardous Chemicals.

Australia Medicines & Poisons Appendix A

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix B

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix D

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix E

MONOETHANOLAMINE (CAS 141-43-5)

Australia Medicines & Poisons Appendix F

MONOETHANOLAMINE (CAS 141-43-5)

Australia Medicines & Poisons Appendix G

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix H

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix I

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix J

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix K

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 10

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 2

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 3

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 4

MONOETHANOLAMINE (CAS 141-43-5)

Australia Medicines & Poisons Schedule 5

MONOETHANOLAMINE (CAS 141-43-5)

Australia Medicines & Poisons Schedule 6

MONOETHANOLAMINE (CAS 141-43-5)

Australia Medicines & Poisons Schedule 7

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 8

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 9

Poisons schedule number not allocated.

High Volume Industrial Chemicals (HVIC)

MONOETHANOLAMINE (CAS 141-43-5)

1000 - 9999 TONNES See the regulation for additional information.

Importation of Ozone Depleting Substances (Customs(Prohibited imports) Regulations 1956, Schedule 10)

Not listed.

National Pollutant Inventory (NPI) substance reporting list

Not listed.

Prohibited Carcinogenic Substances

Not regulated.

Prohibited Substances (National Model Regulation for the control of Workplace Hazardous Substances, Schedule 2 NOHSC:1005 (1994) as amended)

Not listed.

Restricted Importation of Organochlorine Chemicals (Customs(Prohibited Imports) Regulations 1956, Schedule 9)

Not listed.

Restricted Carcinogenic Substances

Not regulated.

International regulations**Stockholm Convention**

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region

Australia

Inventory name

Australian Inventory of Chemical Substances (AICS)

On inventory or exempt (yes/no)*

Yes

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

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other information

Issue date 07-03-2014

Revision date 06-07-2022

Disclaimer 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.

Revision information First-aid measures: Ingestion
Physical & Chemical Properties: Multiple Properties
Toxicological information: Aspiration hazard
Toxicological information: Respiratory or skin sensitization
Toxicological information: Skin contact
Ecological information: Mobility in soil
Transport Information: Material Transportation Information