

SAFETY DATA SHEET

DUOMEEN C

Version 1

Revision Date 06/09/2014

Print Date 09/10/2015

US / Z8

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : DUOMEEN C

Product Use Description : Corrosion inhibitor
Surfactant

Company : Akzo Nobel Surface Chemistry AB
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Sweden

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2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	Liquid/paste.
Color	dark yellow
Odor	ammoniacal

GHS Classification

Acute toxicity (Oral) : Category 3

Skin corrosion : Category 1B

Serious eye damage : Category 1

Specific target organ systemic toxicity - repeated exposure (Oral) : Category 1

Acute aquatic toxicity : Category 1

Chronic aquatic toxicity : Category 1

GHS Label element

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H301 Toxic if swallowed.
H314 Causes severe skin burns and eye damage.
H372 Causes damage to organs through prolonged or repeated

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exposure if swallowed.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements

: **Prevention:**

P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ 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.

P310 Immediately call a POISON CENTER or doctor/ physician.

Potential Health Effects

Inhalation

: Inhalation of aerosols may cause irritation to mucous membranes.
Thermal decomposition can lead to release of irritating gases and vapors.

Skin

: Burns may occur several hours after the removal of the product.
Symptoms may be delayed.
May be harmful in contact with skin.
Causes severe skin burns.
The product may be absorbed through the skin.

Eyes

: Vapor in the eyes may cause irritation and pain.
Causes severe eye burns.

Ingestion

: Harmful if swallowed.
Toxic if swallowed.
Causes burns.

Aggravated Medical Condition

: None known.

Symptoms of Overexposure

: No information available.

Carcinogenicity:

IARC

: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

: 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.

ACGIH

: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

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3. COMPOSITION/INFORMATION ON INGREDIENTS**Hazardous ingredients**

Chemical Name	CAS-No.	Classification	Concentration [%]
N-Coco-1,3-diaminopropane	61791-63-7	Acute Tox. 3; H301 Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT RE 1; H372 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute): 1	90 - 100

For the full text of the H-Statements mentioned in this Section, see Section 16.

The following substances have multiple CAS-number

N-Coco-1,3-diaminopropane : 68155-37-3

4. FIRST AID MEASURES

- General advice : Immediate medical attention is required.
Move out of dangerous area.
Show this material safety data sheet to the doctor in attendance.
Symptoms of poisoning may appear several hours later.
Burns may occur several hours after the removal of the product.
- Inhalation : Obtain medical attention immediately.
If breathed in, move person into fresh air.
- Skin contact : Take off contaminated clothing and shoes immediately.
Carefully remove paste or solidified product.
Wash skin immediately with 0,5 % acetic acid in water, and then with soap and water.
Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
Skin irritation, if untreated, may be prolonged and serious (e.g., necrosis). This may be prevented by early treatment with medium strength corticosteroids.
- Eye contact : In case of contact with eyes, rinse immediately with 0.5% acetic acid in water for a few minutes, followed by rinsing with plenty of water.
Get medical attention immediately. Continue to rinse during transport of patient.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
- Ingestion : Clean mouth with water and drink afterwards plenty of water.
Never give anything by mouth to an unconscious person.

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Take victim immediately to hospital.
Do not induce vomiting! May cause chemical burns in mouth and throat.

Notes to physician

Symptoms : No information available.

Risks : No information available.

Treatment : No information available.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : High volume water jet

Specific hazards during fire fighting / Specific hazards arising from the chemical : Treat as oil fire.
Do not use a solid water stream as it may scatter and spread fire.
Do not allow run-off from fire fighting to enter drains or water courses.

Combustion products : Carbon oxides
Nitrogen oxides (NO_x)

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

See also Section 9. Physical and chemical properties: Safety data

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Use personal protective equipment.
Wear respiratory protection.
Ensure adequate ventilation.

Environmental precautions : Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods for cleaning up / Methods for containment : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

Additional advice : For personal protection see section 8.

7. HANDLING AND STORAGE

Handling

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Advice on safe handling : For personal protection see section 8.
Avoid formation of aerosol.
Do not breathe vapors or spray mist.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Storage

Requirements for storage areas and containers : Prevent unauthorized access.
Keep container tightly closed in a dry and well-ventilated place.
Avoid elevated temperatures.
Reacts with copper, aluminum, zinc and their alloys

Other data : No decomposition if stored and applied as directed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Contains no substances with occupational exposure limit values.

Engineering measures

Provide eyewash station and safety shower. Keep solutions of 0.5% acetic acid in water close at hand.
Effective exhaust ventilation system

Personal protective equipment

Eye/face protection : Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Hand protection : Glove material: Nitrile rubber
: Glove material: butyl-rubber

Skin and body protection : Protective suit

Respiratory protection : In the case of vapor or aerosol formation use a respirator with an approved filter.
Wear full face mask supplied with:
Combination filter: ABEKP.

Hygiene measures : Avoid contact with skin, eyes and clothing.
When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and immediately after handling the product.
Dry-clean contaminated clothing before reuse.

Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform
respective authorities.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Form : Liquid/paste.
Color : dark yellow
Odor : ammoniacal
Odor Threshold : No data available

Safety data

pH : > 10
Melting point/range : 20 - 30 °C
Boiling point/boiling range : > 300 °C
Flash point : 100 - 199 °C
Method: Pensky-Martens ISO 2719
Ignition temperature : > 135 °C
Evaporation rate : No data available
Flammability (solid, gas) : The product is not flammable.
Lower explosion limit : No data available
Upper explosion limit : No data available
Vapor pressure : < 0.1 hPa at 20 °C
Relative vapor density : No data available
Density : 850 kg/m³ at 25 °C
Relative density : ca. 0.85 at 25 °C
Water solubility : slightly soluble
Solubility in other solvents : Alcohol
soluble
Partition coefficient: n-
octanol/water : log Pow: 0.03
at 26 °C
Autoignition temperature : 295 °C
at 1,020 hPa
Decomposition temperature : > 300 °C

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Viscosity, dynamic	: 4 mPa.s at 60 °C
Viscosity, kinematic	: ca. 4.9 mm ² /s at 60 °C
Explosive properties	: Not explosive
Oxidizing properties	: The substance or mixture is not classified as oxidizing.

This material safety datasheet only contains information relating to safety and does not replace any product information or product specification.

10. STABILITY AND REACTIVITY

Conditions to avoid	: Extremes of temperature and direct sunlight.
Materials to avoid	: Reacts with copper, aluminum, zinc and their alloys
Hazardous decomposition products	: No hazardous decomposition products are known.
Thermal decomposition	: > 300 °C
Reactivity	: Stable under normal conditions.
Chemical stability	: Stable under recommended storage conditions.
Hazardous reactions	: No dangerous reaction known under conditions of normal use.

11. TOXICOLOGICAL INFORMATION

PRODUCT INFORMATION:

Toxicology Assessment

Further information	: Causes damage to organs through prolonged or repeated exposure.
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Carcinogenicity:

IARC	: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	: 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.
ACGIH	: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

TOXICOLOGY DATA FOR THE INGREDIENTS:

Test result

Component: N-Coco-1,3-diaminopropane

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Acute oral toxicity	: LD50: > 50 - 300 mg/kg Species: rat Method: OECD Test Guideline 423
Skin irritation	: Species: rabbit Result: Causes burns. Method: OECD Test Guideline 404
Target Organ Systemic Toxicant - Repeated exposure	: Routes of exposure: Ingestion Causes damage to organs through prolonged or repeated exposure.

12. ECOLOGICAL INFORMATION

PRODUCT INFORMATION:

Ecotoxicology Assessment

Additional ecological information	: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.
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Further information on ecology

Hazardous to the ozone layer

Regulation	: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks	: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

INGREDIENTS:

Test result

Component: N-Coco-1,3-diaminopropane

Ecotoxicity effects

Toxicity to fish	: LC50: > 0.1 - 1 mg/l Exposure time: 96 h Species: Danio rerio (zebra fish) Method: OECD Test Guideline 203
Toxicity to algae	: EC50: > 0.1 - 1 mg/l Exposure time: 72 h Species: Pseudokirchneriella subcapitata (green algae) Method: OECD Test Guideline 201 Read-across (Analogy)
M-Factor	: 1
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC: > 0.001 - 0.01 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)

Method: OECD Test Guideline 211
Read-across (Analogy)

Elimination information (persistence and degradability)

Bioaccumulation : Bioaccumulation is unlikely.

Mobility : No data available

Biodegradability : Test Type: Closed Bottle test
Biochemical oxygen demand
Result: Readily biodegradable.
Biodegradation: > 60 % (Biochemical oxygen demand)
Exposure time: 28 d
Method: OECD Test Guideline 301D

Further information on ecology

Biochemical Oxygen Demand (BOD) : No data available

13. DISPOSAL CONSIDERATIONS

Product : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Hazardous waste
Dispose of contents/container in accordance with local regulation.

: Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.

14. TRANSPORT INFORMATION

International regulation

IATA-DGR

UN/ID No. : UN 2922

Proper shipping name : Corrosive liquid, toxic, n.o.s.
(Alkyldiamine)

Class : 8

Subsidiary risk : 6.1

Packing group : II

Labels : 8 (6.1)

Packing instruction (cargo aircraft) : 855

Packing instruction (passenger aircraft) : 851

Packing instruction (LQ) : Y840

Environmentally hazardous : yes

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IMDG-Code

UN number : UN 2922
Proper shipping name : CORROSIVE LIQUID, TOXIC, N.O.S.
(Alkyldiamine)
Class : 8
Subsidiary risk : 6.1
Packing group : II
Labels : 8 (6.1)
EmS Code : F-A, S-B
Marine pollutant : yes
(Alkyldiamine)

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number : UN 2922
Proper shipping name : Corrosive liquids, toxic, n.o.s.
(Alkyldiamine)
Class : 8
Subsidiary risk : 6.1
Packing group : II
Labels : 8 (6.1)
ERG Code : 154
Marine pollutant : yes
(Alkyldiamine)
Reportable Quantity : This product does not contain an environmentally hazardous substance per 49 CFR 172.101, Appendix A.

15. REGULATORY INFORMATION

Notification status

CH INV : YES. On the inventory, or in compliance with the inventory
TSCA : YES. All chemical substances in this product are either listed on the TSCA Inventory or in compliance with a TSCA Inventory exemption.
DSL : YES. All components of this product are on the Canadian DSL.
AICS : YES. On the inventory, or in compliance with the inventory
NZIoC : YES. On the inventory, or in compliance with the inventory
ENCS : YES. On the inventory, or in compliance with the inventory
ISHL : YES. On the inventory, or in compliance with the inventory
KECI : YES. On the inventory, or in compliance with the inventory
PICCS : YES. On the inventory, or in compliance with the inventory
IECSC : YES. On the inventory, or in compliance with the inventory

For explanation of abbreviations, see section 16.

Further information

This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them at their direct requestor at the request of a detergent manufacturer.

OSHA Hazards : Toxic by ingestion, Corrosive to skin

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

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SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard

SARA 302 : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

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California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

16. OTHER INFORMATION

Full text of H-Statements

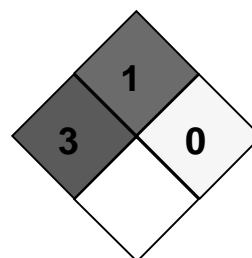
H301	: Toxic if swallowed.
H314	: Causes severe skin burns and eye damage.
H318	: Causes serious eye damage.
H372	: Causes damage to organs through prolonged or repeated exposure if swallowed.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.

Further information

HMIS Classification : Health Hazard: 3
Flammability: 1
Physical hazards: 0

NFPA Classification

: Health Hazard: 3
Fire Hazard: 1
Reactivity Hazard: 0



Notification status explanation

REACH	1907/2006 (EU)
CH INV	Switzerland. New notified substances and declared preparations
TSCA	United States TSCA Inventory
DSL	Canadian Domestic Substances List (DSL)
AICS	Australia Inventory of Chemical Substances (AICS)
NZIoC	New Zealand. Inventory of Chemical Substances
ENCS	Japan. ENCS - Existing and New Chemical Substances Inventory
ISHL	Japan. ISHL - Inventory of Chemical Substances (METI)
KECI	Korea. Korean Existing Chemicals Inventory (KECI)
PICCS	Philippines Inventory of Chemicals and Chemical Substances (PICCS)
IECSC	China. Inventory of Existing Chemical Substances in China (IECSC)

Further information

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The information in this material safety data sheet should be provided to all who will use, handle, store, transport or otherwise be exposed to this product. The user must determine the appropriate measures that need to be implemented for the use and handling of this product in the context of the user's operations and use of this product. The information contained herein supersedes all previously issued bulletins on the subject matter covered. If the date on this document is more than three years old, call to make certain that this sheet is current. No warranty is made as to the product's merchantability or fitness for any particular purpose, or that any suggested use will not infringe any patent. User must determine for himself, by preliminary tests or otherwise, the suitability of this product for his purposes, including mixing with other products. Nothing contained herein shall be construed as granting or extending any license under any patent.

The information provided in this Material 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.