

LANASET® GREY G GR

Version	Revision Date:	SDS Number:	Date of last issue: 05.10.2018
1.2	19.10.2018	400001005645	Date of first issue: 23.05.2018

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Trade name : LANASET® GREY G GR

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Textile dye

Recommended restrictions on use : For industrial use only.

1.3 Details of the supplier of the safety data sheet

Company	: Huntsman Textile Effects
Address	: Klybeckstrasse 200 CH-4057 Basel Switzerland
Telephone	: +41 61 299 11 11
Company	: Huntsman Textile Effects c/o Huntsman Textile Effects (Germany) GmbH
Address	: Rehlinger Straße 1 D-86462 Langweid Germany
Telephone	: +49 8230 410
Telefax	: +49 8230 41 370
E-mail address of person responsible for the SDS	: pehs_te@huntsman.com

1.4 Emergency telephone numberEmergency telephone number : Europe: +32 35751234
Americas: +1 703 527 3887
USA & Canada: 800 424 9300
Africa: +32 35751234
Asia & Pacific: +65 6336 6011
China: +86 20 39377888
+86 532 83889090
India: + 91 22 42 87 5333**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.

Long-term (chronic) aquatic hazard, Category 2 H411: Toxic to aquatic life with long lasting effects.

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2.2 Label elements**Labelling (REGULATION (EC) No 1272/2008)**

Hazard pictograms :



Signal word : Warning

Hazard statements : H317 May cause an allergic skin reaction.
 H411 Toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
 P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
 P273 Avoid release to the environment.
 P280 Wear protective gloves.
Response:
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
 P362 + P364 Take off contaminated clothing and wash it before reuse.
 P391 Collect spillage.

Hazardous components which must be listed on the label:

disodium [4-hydroxy-3-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-1-sulphonato(3-)] [1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)]chromate(2-)

sodium bis[2-(3-chlorophenyl)-2,4-dihydro-4-[[2-hydroxy-5-mesylphenyl]azo]-5-methyl-3H-pyrazol-3-onato(2-)]chromate(1-)

tetrasodium bis[2-[[[3-[[1-[(2-chloroanilino)carbonyl]-2-oxopropyl]azo]-4-hydroxyphenyl]sulphonyl]amino]benzoato(3-)]cobaltate(4-)

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients**3.2 Mixtures****Hazardous components**

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration (% w/w)
disodium [2-hydroxy-3-[(2-hydroxy-1-naphthyl)azo]-5-nitrobenzene-1-sulphonato(3-)] [1-[(2-hydroxy-4-nitrophenyl)azo]-	84145-95-9 282-316-0 01-2120137879-39	Aquatic Chronic2; H411	>= 10 - < 20

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2-naphtholato(2-))]chromate(2-)			
disodium [6-amino-5-[(2-hydroxy-4-nitrophenyl)azo]-N-methylnaphthalene-2-sulphonamido(2-)] [6-amino-5-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-2-sulphonato(3-)]cobaltate(2-)	75314-27-1 278-189-6 01-2120104459-58	Aquatic Chronic2; H411	>= 10 - < 20
disodium [4-hydroxy-3-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-1-sulphonato(3-)] [1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)]chromate(2-)	68541-71-9 271-351-7 01-2120119768-46	Skin Sens.1; H317 Aquatic Acute1; H400 Aquatic Chronic2; H411	>= 10 - < 20
Lignin, alkali, reaction products with formaldehyde and sodium bisulfite	68512-35-6 Polymer	Eye Irrit.2; H319	>= 1 - < 10
sodium bis[2-(3-chlorophenyl)-2,4-dihydro-4-[[2-hydroxy-5-mesylphenyl]azo]-5-methyl-3H-pyrazol-3-onato(2-)]chromate(1-)	51147-75-2 257-014-7	Skin Sens.1; H317 Aquatic Acute1; H400 Aquatic Chronic1; H410	>= 2,5 - < 10
tetrasodium bis[2-[[[3-[[1-[(2-chloroanilino)carbonyl]-2-oxopropyl]azo]-4-hydroxyphenyl]sulphonyl]amino]benzoato(3-)]cobaltate(4-)	70851-34-2 274-929-7 01-2120065791-52	Eye Irrit.2; H319 Skin Sens.1; H317 Aquatic Acute1; H400 Aquatic Chronic1; H410	>= 0,25 - < 1

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Treat symptomatically.
Get medical attention if symptoms occur.
- If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms occur.
- In case of skin contact : If on skin, rinse well with water.
- In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

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If swallowed : Keep respiratory tract clear.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

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

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

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products : Sulphur oxides
Carbon oxides
Carbon dioxide (CO₂)
Carbon monoxide
Formaldehyde
Hydrogen chloride

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

Specific extinguishing methods : No data is available on the product itself.

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.

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

Personal precautions : Use personal protective equipment.
Avoid dust formation.
Avoid breathing dust.
Refer to protective measures listed in sections 7 and 8.

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6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal considerations see section 13., See Section 1 for emergency contact information.,
For personal protection see section 8.

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

Advice on safe handling : Avoid formation of respirable particles.
Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Advice on protection against fire and explosion : Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed.

Hygiene measures : Wash hands before breaks and at the end of workday.

Dust explosion class : St1

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in properly labelled containers.

Advice on common storage : For incompatible materials please refer to Section 10 of this SDS.

Further information on storage stability : Stable under normal conditions.

7.3 Specific end use(s)

Specific use(s) : No data available

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

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
disodium [6-amino-5-[(2-hydroxy-4-nitrophenyl)azo]-N-methylnaphthalene-2-sulphonamidato(2-)][6-amino-5-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-2-sulphonato(3-)]cobaltate(2-)	75314-27-1	TWA (inhalable dust)	0,05 mg/m ³ (Cobalt)	CH SUVA
Further information	Toxic by skin resorption possible; Substances, which are easily absorbed through the skin, can give by additional skin resorption a substantial higher risk compared to only inhalation by the airways., Sensitizers; Substances marked with an S can lead to very strong allergic reactions., Contains substances which are possibly mutagenic to humans., Carcinogenic Category 2, Substance which should be considered to be reprotoxic; the reprotoxicity affects the fertility and sexuality., National Institute for Occupational Safety and Health, Health and Safety Executive (Occupational Medicine and Hygiene Laboratory), BG			
tetrasodium bis[2-[[[3-[[1-(2-chloroanilino)carbonyl]-2-oxopropyl]azo]-4-hydroxyphenyl]sulphonyl]amino]benzoato(3-)]cobaltate(4-)	70851-34-2	TWA (inhalable dust)	0,05 mg/m ³ (Cobalt)	CH SUVA
Further information	Toxic by skin resorption possible; Substances, which are easily absorbed through the skin, can give by additional skin resorption a substantial higher risk compared to only inhalation by the airways., Sensitizers; Substances marked with an S can lead to very strong allergic reactions., Contains substances which are possibly mutagenic to humans., Carcinogenic Category 2, Substance which should be considered to be reprotoxic; the reprotoxicity affects the fertility and sexuality., National Institute for Occupational Safety and Health, Health and Safety Executive (Occupational Medicine and Hygiene Laboratory), BG			

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
sodium sulphate	Workers	Inhalation	Long-term systemic	20 mg/m ³

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			effects	
	Workers	Inhalation	Long-term local effects	20 mg/m3
	Consumers	Inhalation	Long-term systemic effects	12 mg/m3
	Consumers	Inhalation	Long-term local effects	12 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
sodium sulphate	Fresh water	11,09 mg/l
Remarks:	Assessment Factors	
	Marine water	1,109 mg/l
	Assessment Factors	
	Freshwater - intermittent	17,66 mg/l
	Assessment Factors	
	Fresh water sediment	40,2 mg/kg
	Equilibrium method	
	Marine sediment	4,02 mg/kg
	Equilibrium method	
	Soil	1,54 mg/kg
	Equilibrium method	
	Sewage treatment plant	800 mg/l
	Assessment Factors	

8.2 Exposure controls**Personal protective equipment**

Eye protection : Eye wash bottle with pure water
 Tightly fitting safety goggles

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection : Dust impervious protective suit
 Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines

Filter type : Particulates type (P)

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

Appearance	: granules
Colour	: black
Odour	: odourless
Odour Threshold	: No data is available on the product itself.
pH	: 7,5 - 8 Concentration: 20 g/l
Freezing point	: No data is available on the product itself.
Melting point	: No data is available on the product itself.
Boiling point	: No data is available on the product itself.
Flash point	: No data is available on the product itself.
Evaporation rate	: No data is available on the product itself.
Flammability (solid, gas)	: No data is available on the product itself.
Burning rate	: Fire will spread by smouldering or slow decomposition.
Upper explosion limit / Upper flammability limit	: No data is available on the product itself.
Lower explosion limit / Lower flammability limit	: No data is available on the product itself.
Vapour pressure	: No data is available on the product itself.
Relative vapour density	: No data is available on the product itself.
Relative density	: No data is available on the product itself.
Density	: 0,66 g/cm ³ Bulk density
Solubility(ies)	
Water solubility	: 80 g/l (30 °C)
Solubility in other solvents	: No data is available on the product itself.
Partition coefficient: n-octanol/water	: No data is available on the product itself.
Auto-ignition temperature	: No data is available on the product itself.

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Decomposition temperature : > 200 °C

Viscosity : No data is available on the product itself.

Explosive properties : No data is available on the product itself.

Oxidizing properties : None.

9.2 Other information

Impact sensitivity : Not impact sensitive.
Method: Other guidelines

Dust explosion class : St1

Self-ignition : > 500 °C
Method: BAM

SECTION 10: Stability and reactivity**10.1 Reactivity**

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Dust may form explosive mixture in air.

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid : None known.

10.6 Hazardous decomposition products

Hazardous decomposition products : Sulphur Oxides
carbon dioxide
carbon monoxide
formaldehyde
hydrogen chloride
Sodium oxides

SECTION 11: Toxicological information**11.1 Information on toxicological effects**

Acute toxicity

Components:

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disodium [2-hydroxy-3-[(2-hydroxy-1-naphthyl)azo]-5-nitrobenzene-1-sulphonato(3-)] [1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)]chromate(2-):

Acute oral toxicity : (Rat): > 5 000 mg/kg

disodium [6-amino-5-[(2-hydroxy-4-nitrophenyl)azo]-N-methylnaphthalene-2-sulphonamidato(2-)] [6-amino-5-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-2-sulphonato(3-)]cobaltate(2-):

Acute oral toxicity : LD50 (Rat): > 2 000 mg/kg

Method: OECD Test Guideline 401

GLP: yes

Assessment: The substance or mixture has no acute oral toxicity

disodium [4-hydroxy-3-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-1-sulphonato(3-)] [1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)]chromate(2-):

Acute oral toxicity : LD50 (Rat): > 2 000 mg/kg

Method: OECD Test Guideline 420

Assessment: The substance or mixture has no acute oral toxicity

Lignin, alkali, reaction products with formaldehyde and sodium bisulfite:

Acute oral toxicity : LD50 (Rat): > 5 000 mg/kg

Method: No information available.

Assessment: The substance or mixture has no acute oral toxicity

sodium bis[2-(3-chlorophenyl)-2,4-dihydro-4-[[2-hydroxy-5-mesylphenyl]azo]-5-methyl-3H-pyrazol-3-onato(2-)]chromate(1-):

Acute oral toxicity : LD50 (Rat): > 2 000 mg/kg

Method: No information available.

Assessment: The substance or mixture has no acute oral toxicity

tetrasodium bis[2-[[[3-[[1-[(2-chloroanilino)carbonyl]-2-oxopropyl]azo]-4-hydroxyphenyl]sulphonyl]amino]benzoato(3-)]cobaltate(4-):

Acute oral toxicity : LD50 (Rat): ca. 3 500 mg/kg

Method: No information available.

Acute inhalation toxicity : No data available

Acute dermal toxicity : No data available

Acute toxicity (other routes of administration) : No data available

Skin corrosion/irritation**Components:**

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disodium [6-amino-5-[(2-hydroxy-4-nitrophenyl)azo]-N-methylnaphthalene-2-sulphonamido(2-)] [6-amino-5-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-2-sulphonato(3-)]cobaltate(2-):

Species: Rabbit

Remarks: slight irritation

disodium [4-hydroxy-3-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-1-sulphonato(3-)] [1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)]chromate(2-):

Species: Rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

GLP: yes

Lignin, alkali, reaction products with formaldehyde and sodium bisulfite:

Species: Rabbit

Method: No information available.

Result: No skin irritation

Serious eye damage/eye irritation**Components:**

disodium [6-amino-5-[(2-hydroxy-4-nitrophenyl)azo]-N-methylnaphthalene-2-sulphonamido(2-)] [6-amino-5-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-2-sulphonato(3-)]cobaltate(2-):

Species: Rabbit

Method: No information available.

Result: No eye irritation

disodium [4-hydroxy-3-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-1-sulphonato(3-)] [1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)]chromate(2-):

Species: Rabbit

Method: OECD Test Guideline 405

Result: No eye irritation

Lignin, alkali, reaction products with formaldehyde and sodium bisulfite:

Species: Rabbit

Result: Eye irritation

tetrasodium bis[2-[[[3-[[1-[(2-chloroanilino)carbonyl]-2-oxopropyl]azo]-4-hydroxyphenyl]sulphonyl]amino]benzoato(3-)]cobaltate(4-):

Species: Rabbit

Assessment: Irritant

Method: No information available.

Result: Irritating to eyes.

Respiratory or skin sensitisation**Components:**

disodium [2-hydroxy-3-[(2-hydroxy-1-naphthyl)azo]-5-nitrobenzene-1-sulphonato(3-)] [1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)]chromate(2-):

Exposure routes: Skin

Species: Guinea pig

Method: OECD Test Guideline 406

Result: Does not cause skin sensitisation.

disodium [6-amino-5-[(2-hydroxy-4-nitrophenyl)azo]-N-methylnaphthalene-2-sulphonamido(2-)] [6-amino-5-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-2-sulphonato(3-)]cobaltate(2-):

Exposure routes: Skin

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Species: Guinea pig
 Method: OECD Test Guideline 406
 Result: Does not cause skin sensitisation.

disodium [4-hydroxy-3-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-1-sulphonato(3-)]1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)]chromate(2-):

Exposure routes: Skin
 Species: Guinea pig
 Assessment: May cause sensitisation by skin contact.
 Method: OECD Test Guideline 406

Lignin, alkali, reaction products with formaldehyde and sodium bisulfite:
 Result: Does not cause skin sensitisation.

sodium bis[2-(3-chlorophenyl)-2,4-dihydro-4-[[2-hydroxy-5-mesyphenyl]azo]-5-methyl-3H-pyrazol-3-onato(2-)]chromate(1-):

Exposure routes: Skin
 Species: Guinea pig
 Assessment: May cause sensitisation by skin contact.
 Method: OECD Test Guideline 406
 Result: Causes sensitisation.

tetrasodium bis[2-[[[3-[[1-[(2-chloroanilino)carbonyl]-2-oxopropyl]azo]-4-hydroxyphenyl]sulphonyl]amino]benzoato(3-)]cobaltate(4-):

Exposure routes: Skin
 Species: Guinea pig
 Assessment: May cause sensitisation by skin contact.
 Method: OECD Test Guideline 406
 Result: Causes sensitisation.

Assessment: No data available

Germ cell mutagenicity**Components:**

disodium [6-amino-5-[(2-hydroxy-4-nitrophenyl)azo]-N-methylnaphthalene-2-sulphonamidato(2-)] [6-amino-5-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-2-sulphonato(3-)]cobaltate(2-):

Genotoxicity in vitro : Method: OECD Test Guideline 473
 Result: negative

disodium [4-hydroxy-3-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-1-sulphonato(3-)]1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)]chromate(2-):

Genotoxicity in vitro : Test Type: Ames test
 Test system: Salmonella typhimurium
 Metabolic activation: with and without metabolic activation
 Method: OECD Test Guideline 471
 Result: positive

: Test Type: gene mutation test
 Test system: Chinese hamster ovary cells
 Metabolic activation: with and without metabolic activation
 Method: OECD Test Guideline 476
 Result: negative

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: Test Type: gene mutation test
 Test system: Chinese hamster fibroblasts
 Metabolic activation: with and without metabolic activation
 Method: OECD Test Guideline 473
 Result: negative

Lignin, alkali, reaction products with formaldehyde and sodium bisulfite:

Genotoxicity in vitro : Test Type: Ames test
 Metabolic activation: with and without metabolic activation
 Result: negative

tetrasodium bis[2-[[[3-[[1-[(2-chloroanilino)carbonyl]-2-oxopropyl]azo]-4-hydroxyphenyl]sulphonyl]amino]benzoato(3-)]cobaltate(4-):

Genotoxicity in vitro : Metabolic activation: with and without metabolic activation
 Method: OECD Test Guideline 476
 Result: negative

Genotoxicity in vivo : No data available

Carcinogenicity

No data available

Carcinogenicity - Assessment : No data available

Reproductive toxicity**Components:**

disodium [4-hydroxy-3-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-1-sulphonato(3-)] [1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)]chromate(2-):

Effects on fertility : Species: Rat, male and female
 Application Route: Oral
 Dose: 100, 330 or 1000 milligram per kilogram
 General Toxicity - Parent: No observed adverse effect level: 1 000 mg/kg body weight
 General Toxicity F1: No observed adverse effect level: 1 000 mg/kg body weight
 Method: OECD Test Guideline 422

tetrasodium bis[2-[[[3-[[1-[(2-chloroanilino)carbonyl]-2-oxopropyl]azo]-4-hydroxyphenyl]sulphonyl]amino]benzoato(3-)]cobaltate(4-):

Species: Rat, male and female
 Application Route: Oral
 Method: OECD Test Guideline 422
 Result: No effects on fertility and early embryonic development were detected.

Components:

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disodium [4-hydroxy-3-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-1-sulphonato(3-)] [1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)]chromate(2-):

Effects on foetal development : Species: Rat, male and female
 Application Route: Oral
 Dose: 100, 330 or 1000 milligram per kilogram
 General Toxicity Maternal: No observed adverse effect level: 1 000 mg/kg body weight
 Developmental Toxicity: No observed adverse effect level: 1 000 mg/kg body weight
 Method: OECD Test Guideline 422
 Result: Animal testing did not show any effects on fertility.

Reproductive toxicity - Assessment : No data available

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Repeated dose toxicity**Components:**

disodium [4-hydroxy-3-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-1-sulphonato(3-)] [1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)]chromate(2-):

Species: Rat, male and female
 NOAEL: 1 000 mg/kg
 Application Route: Oral
 Dose: 100, 330 or 1000 mg/kg/day
 Method: OECD Test Guideline 422

tetrasodium bis[2-[[[3-[[1-[(2-chloroanilino)carbonyl]-2-oxopropyl]azo]-4-hydroxyphenyl]sulphonyl]amino]benzoato(3-)]cobaltate(4-):

Species: Rat, male and female
 LOAEL: 100
 Application Route: Ingestion
 Method: Subacute toxicity

Repeated dose toxicity - Assessment : No data available

Aspiration toxicity

No data available

Experience with human exposure

General Information: No data available

Inhalation: No data available

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Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information

Ingestion: No data available

SECTION 12: Ecological information**12.1 Toxicity****Product:**

Toxicity to fish : LC50 : 18 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1 - < 10 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to microorganisms : IC50 : > 100 mg/l
Exposure time: 3 h

Components:

disodium [2-hydroxy-3-[(2-hydroxy-1-naphthyl)azo]-5-nitrobenzene-1-sulphonato(3-)] [1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)]chromate(2-):

Toxicity to fish : LC50 : 7 mg/l
Exposure time: 48 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Lemna gibba (gibbous duckweed)): 69 mg/l
Exposure time: 7 d
Method: OECD Test Guideline 221

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Toxicity to microorganisms : IC50 : > 300 mg/l
Exposure time: 3 h

Ecotoxicology Assessment
Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

disodium [6-amino-5-[(2-hydroxy-4-nitrophenyl)azo]-N-methylnaphthalene-2-sulphonamidato(2-)] [6-amino-5-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-2-sulphonato(3-)]cobaltate(2-):

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 305,77 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 131 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : NOEC (Lemna gibba (gibbous duckweed)): 0,87 mg/l
Exposure time: 7 d
Test Type: static test
Method: OECD Test Guideline 221

Toxicity to microorganisms : IC50 : > 320 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Ecotoxicology Assessment
Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

disodium [4-hydroxy-3-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-1-sulphonato(3-)] [1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)]chromate(2-):

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 146 mg/l
Exposure time: 48 h
Test Type: semi-static test
Method: OECD Test Guideline 202

Toxicity to algae : ErC50 (Lemna minor (duckweed)): 82 mg/l
Exposure time: 7 d
Method: OECD Test Guideline 221

Toxicity to microorganisms : IC50 : > 320 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Ecotoxicology Assessment
Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Lignin, alkali, reaction products with formaldehyde and sodium bisulfite:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 615 mg/l
Exposure time: 96 h

sodium bis[2-(3-chlorophenyl)-2,4-dihydro-4-[[2-hydroxy-5-mesyphenyl]azo]-5-methyl-3H-pyrazol-3-onato(2-)]chromate(1-):

Toxicity to fish : LC50 : > 100 mg/l
Exposure time: 96 h

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Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,6 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

M-Factor (Acute aquatic toxicity) : 1

Toxicity to microorganisms : IC50 : > 300 mg/l
Exposure time: 3 h
Method: No information available.

tetrasodium bis[2-[[[3-[[1-[(2-chloroanilino)carbonyl]-2-oxopropyl]azo]-4-hydroxyphenyl]sulphonyl]amino]benzoato(3-)]cobaltate(4-):

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): 0,52 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 30,5 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : ErC50 (Lemna gibba (gibbous duckweed)): > 96 mg/l
Exposure time: 168 h
Method: OECD Test Guideline 221

M-Factor (Acute aquatic toxicity) : 1

Toxicity to microorganisms : IC50 : > 320 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
GLP: yes

12.2 Persistence and degradability**Product:**

Biodegradability : Biodegradation: 70 - 80 %
Exposure time: 28 d
Method: OECD Test Guideline 302B

Biochemical Oxygen Demand (BOD) : 25 mgO₂/g

Chemical Oxygen Demand (COD) : 1000 mgO₂/g

Components:

disodium [2-hydroxy-3-[(2-hydroxy-1-naphthyl)azo]-5-nitrobenzene-1-sulphonato(3-)] [1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)]chromate(2-):

Biodegradability : Biodegradation: 0 %
Exposure time: 28 d
Method: Inherent Biodegradability: Modified MITI Test (II)

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Biochemical Oxygen Demand (BOD) : 0 mgO₂/g
 Incubation time: 5 d
 Method: Inherent Biodegradability: Modified MITI Test (II)

Chemical Oxygen Demand (COD) : 824 mgO₂/g

disodium [6-amino-5-[(2-hydroxy-4-nitrophenyl)azo]-N-methylnaphthalene-2-sulphonamido(2-)][6-amino-5-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-2-sulphonato(3-)]cobaltate(2-):

Biodegradability : Result: Not biodegradable
 Biodegradation: 0 %
 Exposure time: 21 d

Biochemical Oxygen Demand (BOD) : 0 mgO₂/g
 Incubation time: 5 d
 Method: Directive 67/548/EEC, Annex V, C.5

Chemical Oxygen Demand (COD) : 493 mgO₂/g

disodium [4-hydroxy-3-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-1-sulphonato(3-)][1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)]chromate(2-):

Biodegradability : Result: Not biodegradable
 Biodegradation: 22,9 %
 Exposure time: 28 d
 Method: OECD Test Guideline 302B

Biochemical Oxygen Demand (BOD) : 4 mgO₂/g
 Incubation time: 5 d
 Method: Directive 67/548/EEC, Annex V, C.5

Chemical Oxygen Demand (COD) : 496 mgO₂/g

Lignin, alkali, reaction products with formaldehyde and sodium bisulfite:

Biodegradability : Result: Not biodegradable
 Biodegradation: < 5 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301E

sodium bis[2-(3-chlorophenyl)-2,4-dihydro-4-[[2-hydroxy-5-mesyphenyl]azo]-5-methyl-3H-pyrazol-3-onato(2-)]chromate(1-):

Biochemical Oxygen Demand (BOD) : 0 mgO₂/g
 Incubation time: 5 d
 Method: Inherent Biodegradability: Modified MITI Test (II)

Chemical Oxygen Demand (COD) : 1118 mgO₂/g

tetrasodium bis[2-[[[3-[[1-[(2-chloroanilino)carbonyl]-2-oxopropyl]azo]-4-hydroxyphenyl]sulphonyl]amino]benzoato(3-)]cobaltate(4-):

Biodegradability : Biodegradation: 0,3 %
 Exposure time: 28 d
 Method: OECD Test Guideline 302B

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Biochemical Oxygen Demand (BOD) : 0 mg/g
Incubation time: 5 d
Method: Directive 67/548/EEC, Annex V, C.5
GLP: yes

Chemical Oxygen Demand (COD) : 892 mg/g

Stability in water : Degradation half life (DT50): 3 697 hrs (20 °C)
pH: 7
Method: OECD Test Guideline 111
Remarks: Fresh water

12.3 Bioaccumulative potential**Components:**

disodium [2-hydroxy-3-[(2-hydroxy-1-naphthyl)azo]-5-nitrobenzene-1-sulphonato(3-)] [1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)]chromate(2-):

Partition coefficient: n-octanol/water : log Pow: < 3

disodium [4-hydroxy-3-[(2-hydroxy-4-nitrophenyl)azo]naphthalene-1-sulphonato(3-)] [1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)]chromate(2-):

Partition coefficient: n-octanol/water : log Pow: < 3

Lignin, alkali, reaction products with formaldehyde and sodium bisulfite:

Partition coefficient: n-octanol/water : log Pow: -3,45

sodium bis[2-(3-chlorophenyl)-2,4-dihydro-4-[[2-hydroxy-5-mesylphenyl]azo]-5-methyl-3H-pyrazol-3-onato(2-)]chromate(1-):

Partition coefficient: n-octanol/water : log Pow: < 3 (20 °C)
Method: No information available.

tetrasodium bis[2-[[[3-[[1-[(2-chloroanilino)carbonyl]-2-oxopropyl]azo]-4-hydroxyphenyl]sulphonyl]amino]benzoato(3-)]cobaltate(4-):

Partition coefficient: n-octanol/water : log Pow: 1,24 (20 °C)
Method: OECD Test Guideline 107

12.4 Mobility in soil**Components:**

tetrasodium bis[2-[[[3-[[1-[(2-chloroanilino)carbonyl]-2-oxopropyl]azo]-4-hydroxyphenyl]sulphonyl]amino]benzoato(3-)]cobaltate(4-):

Distribution among environmental compartments : Koc: < 1,5
Method: OECD Test Guideline 121

12.5 Results of PBT and vPvB assessment**Product:**

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

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12.6 Other adverse effects**Product:**

Adsorbed organic bound halogens (AOX)	:	.28 % Test substance: Chlorine
Additional ecological information	:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

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. Send to a licensed waste management company. Dispose of as hazardous waste in compliance with local and national regulations. Dispose of contents/ container to an approved waste disposal plant.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

SECTION 14: Transport information

IATA	
14.1 UN number	: UN 3077
14.2 UN proper shipping name	: Environmentally hazardous substance, solid, n.o.s. (AZO METAL COMPLEX DYESTUFF, CHROMIUM COMPLEX MONOAZO DYESTUFF)
14.3 Transport hazard class(es)	: 9
14.4 Packing group	: III
Labels	: Miscellaneous
Packing instruction (cargo aircraft)	: 956
Packing instruction (passenger aircraft)	: 956
IATA (Passenger)	
Environmentally hazardous	: yes
IATA (Cargo)	
Environmentally hazardous	: yes

IMDG

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14.1 UN number : UN 3077
14.2 UN proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (AZO METAL COMPLEX DYESTUFF, CHROMIUM COMPLEX MONOAZO DYESTUFF)
14.3 Transport hazard class(es) : 9
14.4 Packing group : III
Labels : 9
EmS Code : F-A, S-F
14.5 Environmental hazards
Marine pollutant : yes

ADR

14.1 UN number : UN 3077
14.2 UN proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (AZO METAL COMPLEX DYESTUFF, CHROMIUM COMPLEX MONOAZO DYESTUFF)
14.3 Transport hazard class(es) : 9
14.4 Packing group : III
Labels : 9
14.5 Environmental hazards
Environmentally hazardous : yes

RID

14.1 UN number : UN 3077
14.2 UN proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (AZO METAL COMPLEX DYESTUFF, CHROMIUM COMPLEX MONOAZO DYESTUFF)
14.3 Transport hazard class(es) : 9
14.4 Packing group : III
Labels : 9
14.5 Environmental hazards
Environmentally hazardous : yes

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).
REACH - List of substances subject to authorisation (Annex XIV) : Not applicable
REACH - List of substances subject to authorisation - : Not applicable

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Future sunset date

Ordinance on Protection against Major Accidents
 Threshold quantity according to Major Accidents Ordinance (MAO 814.012) : 20 000 kg

Other regulations:

Article 4 para. 4 of the Ordinance on the protection of young people in the workplace (SR 822.115) and Article 1 lit. f of the EAER regulation on hazardous work and young people (SR 822.115.2): Young people undergoing basic vocational training may only work with this product if the relevant training ordinance makes provision for them to do so with a view to enabling them to achieve their training objectives and if the preconditions for the training plan have been met and the applicable age restrictions have been complied with. Young people who are not completing any basic vocational training are not permitted to work with this product. Employees of either sex who are under 18 years old are classed as young people.

The components of this product are reported in the following inventories:

DSL	: This product contains one or several components listed in the Canadian NDSL.
AICS	: Low volume exemption
NZIoC	: On the inventory, or in compliance with the inventory
ENCS	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TCSI	: On the inventory, or in compliance with the inventory
TSCA	: On the inventory, or in compliance with the inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), ENCS (Japan), KECI (Korea), NZIOIC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (United States of America (USA))

15.2 Chemical safety assessment

Chemical Safety Assessments for all substances in this product are either Complete or Not applicable.

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SECTION 16: Other information**Full text of H-Statements**

H317 : May cause an allergic skin reaction.
H319 : Causes serious eye irritation.
H400 : Very toxic to aquatic life.
H410 : Very toxic to aquatic life with long lasting effects.
H411 : Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Aquatic Acute : Short-term (acute) aquatic hazard
Aquatic Chronic : Long-term (chronic) aquatic hazard
Eye Irrit. : Eye irritation
Skin Sens. : Skin sensitisation
CH SUVA : Switzerland. Limit values at the work place
CH SUVA / TWA : Time Weighted Average

Classification of the mixture:**Classification procedure:**

Skin Sens. 1	H317	Calculation method
Aquatic Chronic 2	H411	Calculation method

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