

# SAFETY DATA SHEET

According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization;  
Regulation on Safety data sheets regarding hazardous substances and mixtures".

**HUNTSMAN**

Enriching lives through innovation

## NOVACRON® NAVY S-G

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: -           |
| 1.0     | 05.07.2016     | 400001006664 | Date of first issue: 05.07.2016 |

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

#### 1.1 Product identifier

Trade name : NOVACRON® NAVY S-G

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

Use of the Substance/Mixture : Textile dyes, finishing and impregnating products; including bleaches and other processing aids

#### 1.3 Details of the supplier of the safety data sheet

|  |   |
|--|---|
| Company  | : Huntsman Textile Effects  |
| Address  | : Klybeckstrasse 200<br>CH-4057 Basel<br>Switzerland                      |
| Telephone  | : +41 61 299 11 11  |
| Company  | : Huntsman Textile Effects c/o Huntsman Textile Effects<br>(Germany) GmbH |
| Address  | : Rehlinger Straße 1<br>D-86462 Langweid<br>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 number

Emergency telephone number : Europe: +32 35751234  
Americas: +1 703 527 3887  
Africa: +32 35751234  
Asia & Pacific: +65 6336 6011  
China: +86 20 39377888  
+86 532 83889090  
India: + 91 22 42 87 5333  
USA & Canada: 800 424 9300

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification T.R. SEA No 28848

|                                       |  |
|---------------------------------------|--|
| Serious eye damage, Category 1        | H318: Causes serious eye damage.   |
| Respiratory sensitisation, Category 1 | H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Skin sensitisation, Category 1        | H317: May cause an allergic skin reaction.                                       |

# SAFETY DATA SHEET

According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization; Regulation on Safety data sheets regarding hazardous substances and mixtures".

**HUNTSMAN**

Enriching lives through innovation

## NOVACRON® NAVY S-G

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: -           |
| 1.0     | 05.07.2016     | 400001006664 | Date of first issue: 05.07.2016 |

### 2.2 Label elements

#### Labelling T.R. SEA No 28848

Hazard pictograms :



Signal word : Danger

Hazard statements : H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements : **Prevention:**  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P280 Wear protective gloves/ eye protection/ face protection.  
P284 Wear respiratory protection.  
**Response:**  
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.

Hazardous components which must be listed on the label:

mixture of: 4-amino-3-(4-ethenesulfonyl-2-sulfonatophenylazo)-5-hydroxy-6-(5-{4-chloro-6-[4-(2-sulfonatooxyethanesulfonyl)phenylamin

tetrasodium 4-amino-5-hydroxy-3,6-bis[[4-[[2-(sulphonatooxy)ethyl]sulphonyl]phenyl]azo]naphthalene-2,7-disulphonate

### 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.  
No information available.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Hazardous components

| Chemical name | CAS-No.<br>EC-No. | T.R. SAE No<br>27092 | T.R. SEA No 28848 | Concentration<br>(% w/w) |
|---------------|-------------------|----------------------|-------------------|--------------------------|
|               |                   |                      |                   |                          |

# SAFETY DATA SHEET

According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization;  
Regulation on Safety data sheets regarding hazardous substances and mixtures".

**HUNTSMAN**

Enriching lives through innovation

## NOVACRON® NAVY S-G

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: -           |
| 1.0     | 05.07.2016     | 400001006664 | Date of first issue: 05.07.2016 |

|   |                          |                    |   |         |
|---|--------------------------|--------------------|---|---------|
| mixture of: 4-amino-3-(4-ethenesulfonyl-2-sulfonatophenylazo)-5-hydroxy-6-(5-{4-chloro-6-[4-(2-sulfonatooxyethanesulfonyl)phenyl]amin | 586372-44-3<br>451-440-9 | Xi; R41<br>Xi; R41 | Eye Dam.1; H318                         | 30 - 60 |
| tetrasodium 4-amino-5-hydroxy-3,6-bis[[4-[[2-(sulphonatooxy)ethyl]sulphonyl]phenyl]azo]naphthalene-2,7-disulphonate                   | 17095-24-8<br>241-164-5  | Xn; R42/43         | Resp. Sens.1; H334<br>Skin Sens.1; H317 | 1 - 3   |
| distillates (petroleum), solvent-dewaxed light paraffinic   | 64742-56-9<br>265-159-2  | Carc.Cat.2; R45    |   | 0.1 - 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.<br>Consult a physician.<br>Show this safety data sheet to the doctor in attendance.<br>Do not leave the victim unattended.   |
| If inhaled              | : Call a physician or poison control centre immediately.<br>If unconscious place in recovery position and seek medical advice.   |
| In case of skin contact | : If on skin, rinse well with water.   |
| In case of eye contact  | : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.<br>In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.<br>Continue rinsing eyes during transport to hospital. Remove contact lenses.<br>Protect unharmed eye.<br>Keep eye wide open while rinsing.<br>If eye irritation persists, consult a specialist. |
| If swallowed            | : Keep respiratory tract clear.<br>Do NOT induce vomiting.<br>Do not give milk or alcoholic beverages.<br>Never give anything by mouth to an unconscious person.<br>If symptoms persist, call a physician.<br>Take victim immediately to hospital.   |

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

None known.

# SAFETY DATA SHEET

According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization; Regulation on Safety data sheets regarding hazardous substances and mixtures".

**HUNTSMAN**

Enriching lives through innovation

## NOVACRON® NAVY S-G

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: -           |
| 1.0     | 05.07.2016     | 400001006664 | Date of first issue: 05.07.2016 |

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

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : No data is available on the product itself.

Unsuitable extinguishing media : High volume water jet

### 5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : No data is available on the product itself.

### 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.  
Ensure adequate ventilation.

### 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

None

# SAFETY DATA SHEET

According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization;  
Regulation on Safety data sheets regarding hazardous substances and mixtures".

**HUNTSMAN**

Enriching lives through innovation

## NOVACRON® NAVY S-G

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: -           |
| 1.0     | 05.07.2016     | 400001006664 | Date of first issue: 05.07.2016 |

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

- |   |   |
|---|---|
| Advice on safe handling                         | : Avoid formation of respirable particles.<br>Do not breathe vapours/dust.<br>Avoid exposure - obtain special instructions before use.<br>Avoid contact with skin and eyes.<br>For personal protection see section 8.<br>Smoking, eating and drinking should be prohibited in the application area.<br>Provide sufficient air exchange and/or exhaust in work rooms.<br>Dispose of rinse water in accordance with local and national regulations.<br>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                                | : When using do not eat or drink. When using do not smoke.<br>Wash hands before breaks and at the end of workday.   |

#### 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. Electrical installations / working materials must comply with the technological safety standards. |
| Advice on common storage                      | : No hazardous decomposition products are known.  |
| Other data                                    | : No decomposition if stored and applied as directed.   |

#### 7.3 Specific end use(s)

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

#### 8.2 Exposure controls

##### Personal protective equipment

- |                 |   |
|-----------------|---|
| Eye protection  | : Tightly fitting safety goggles<br><br>Eye wash bottle with pure water<br>Tightly fitting safety goggles<br>Wear face-shield and protective suit for abnormal processing problems. |
| Hand protection |   |

# SAFETY DATA SHEET

According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization;  
Regulation on Safety data sheets regarding hazardous substances and mixtures".

**HUNTSMAN**

Enriching lives through innovation

## NOVACRON® NAVY S-G

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: -           |
| 1.0     | 05.07.2016     | 400001006664 | Date of first issue: 05.07.2016 |

|                          |   |
|--------------------------|---|
| Material                 | : Neoprene gloves   |
| Break through time       | : < 1 h   |
| 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<br>Choose body protection according to the amount and concentration of the dangerous substance at the work place.   |
| Respiratory protection   | : P3 filter<br><br>In the case of dust or aerosol formation use respirator with an approved filter.<br>Dust safety masks are recommended when the dust concentration is more than 10 mg/m3. |

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|                                     |   |
|-------------------------------------|---|
| Appearance                          | : granules                                    |
| Colour                              | : black                                       |
| Odour                               | : odourless                                   |
| pH                                  | : 5,5 - 6<br>Concentration: 20 g/l (20 °C)    |
| Melting point                       | : > 300 °C                                    |
| Flash point                         | : No data is available on the product itself. |
| Density                             | : 0,729 g/cm3<br>Bulk density<br>1 g/cm3      |
| Solubility(ies)<br>Water solubility | : > 100 g/l (20 °C)                           |
| Viscosity                           | : No data is available on the product itself. |
| Oxidizing properties                | : None.                                       |

### 9.2 Other information

No data available

# SAFETY DATA SHEET

According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization;  
Regulation on Safety data sheets regarding hazardous substances and mixtures".

**HUNTSMAN**

Enriching lives through innovation

## NOVACRON® NAVY S-G

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: -           |
| 1.0     | 05.07.2016     | 400001006664 | Date of first issue: 05.07.2016 |

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

No decomposition if stored and applied as directed.

#### 10.2 Chemical stability

No decomposition if stored and applied as directed.

#### 10.3 Possibility of hazardous reactions

Hazardous reactions : None known.  
Stable under normal conditions.

No decomposition if stored and applied as directed.

Dust may form explosive mixture in air.

#### 10.4 Conditions to avoid

Conditions to avoid : None.

No data available

#### 10.5 Incompatible materials

#### 10.6 Hazardous decomposition products

Stable under normal conditions.

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

##### Acute toxicity

Acute oral toxicity - Product : LD50 (Rat): > 2.000 mg/kg

Acute inhalation toxicity : No data available

Acute dermal toxicity - Product : LD50 (Rat): > 2.000 mg/kg

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

##### Skin corrosion/irritation

##### Product:

Species: Rabbit

Assessment: No skin irritation

Method: OECD Test Guideline 404

Result: No skin irritation

Remarks: Extremely corrosive and destructive to tissue.

# SAFETY DATA SHEET

According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization;  
Regulation on Safety data sheets regarding hazardous substances and mixtures".

**HUNTSMAN**

Enriching lives through innovation

## NOVACRON® NAVY S-G

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: -           |
| 1.0     | 05.07.2016     | 400001006664 | Date of first issue: 05.07.2016 |

### Serious eye damage/eye irritation

#### Product:

Species: Rabbit  
Assessment: Stains the eyes  
Method: OECD Test Guideline 405  
Result: Stains the eyes

Remarks: May cause irreversible eye damage.

### Respiratory or skin sensitisation

#### Product:

Exposure routes: Skin  
Species: Guinea pig  
Method: OECD Test Guideline 406  
Result: Causes sensitisation.

Remarks: Causes sensitisation.

#### Components:

mixture of: 4-amino-3-(4-ethenesulfonyl-2-sulfonatophenylazo)-5-hydroxy-6-(5-{4-chloro-6-[4-(2-sulfonatooxyethanesulfonyl)phenylamin:

Assessment: Causes serious eye damage.  
Does not cause skin sensitisation.

mixture of: 4-amino-3-(4-ethenesulfonyl-2-sulfonatophenylazo)-5-hydroxy-6-(5-{4-chloro-6-[4-(2-sulfonatooxyethanesulfonyl)phenylamin:

Assessment: Causes serious eye damage.  
Does not cause skin sensitisation.

### Germ cell mutagenicity

#### Components:

tetrasodium 4-amino-5-hydroxy-3,6-bis[[4-[[2-(sulphonatooxy)ethyl]sulphonyl]phenyl]azo]naphthalene-2,7-disulphonate:

Genotoxicity in vitro : Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative

mixture of: 4-amino-3-(4-ethenesulfonyl-2-sulfonatophenylazo)-5-hydroxy-6-(5-{4-chloro-6-[4-(2-sulfonatooxyethanesulfonyl)phenylamin:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro  
Test species: Chinese hamster lung cells  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 473  
Result: negative

: Test Type: Ames test  
Test species: Salmonella tryphimurium and E. coli



# SAFETY DATA SHEET

According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization;  
Regulation on Safety data sheets regarding hazardous substances and mixtures".

**HUNTSMAN**

Enriching lives through innovation

## NOVACRON® NAVY S-G

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: -           |
| 1.0     | 05.07.2016     | 400001006664 | Date of first issue: 05.07.2016 |

Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative

tetrasodium 4-amino-5-hydroxy-3,6-bis[[4-[[2-(sulphonatooxy)ethyl]sulphonyl]phenyl]azo]naphthalene-2,7-disulphonate:  
Genotoxicity in vitro : Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative

mixture of: 4-amino-3-(4-ethenesulfonyl-2-sulfonatophenylazo)-5-hydroxy-6-(5-{4-chloro-6-[4-(2-sulfonatooxyethanesulfonyl)phenyl]amin-  
Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro  
Test species: Chinese hamster lung cells  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 473  
Result: negative

: Test Type: Ames test  
Test species: Salmonella tryphimurium and E. coli  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative

### Components:

tetrasodium 4-amino-5-hydroxy-3,6-bis[[4-[[2-(sulphonatooxy)ethyl]sulphonyl]phenyl]azo]naphthalene-2,7-disulphonate:  
Genotoxicity in vivo : Cell type: Somatic  
Application Route: Oral  
Dose: 5000 mg/kg  
Method: OECD Test Guideline 473  
Result: negative

Method: OECD Test Guideline 474  
Result: negative

tetrasodium 4-amino-5-hydroxy-3,6-bis[[4-[[2-(sulphonatooxy)ethyl]sulphonyl]phenyl]azo]naphthalene-2,7-disulphonate:  
Genotoxicity in vivo : Cell type: Somatic  
Application Route: Oral  
Dose: 5000 mg/kg  
Method: OECD Test Guideline 473  
Result: negative

Method: OECD Test Guideline 474  
Result: negative

# SAFETY DATA SHEET

According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization;  
Regulation on Safety data sheets regarding hazardous substances and mixtures".

**HUNTSMAN**

Enriching lives through innovation

## NOVACRON® NAVY S-G

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: -           |
| 1.0     | 05.07.2016     | 400001006664 | Date of first issue: 05.07.2016 |

### Components:

mixture of: 4-amino-3-(4-ethenesulfonyl-2-sulfonatophenylazo)-5-hydroxy-6-(5-{4-chloro-6-[4-(2-sulfonatooxyethanesulfonyl)phenylamin:

Germ cell mutagenicity- : Tests on bacterial or mammalian cell cultures did not show  
Assessment mutagenic effects.

mixture of: 4-amino-3-(4-ethenesulfonyl-2-sulfonatophenylazo)-5-hydroxy-6-(5-{4-chloro-6-[4-(2-sulfonatooxyethanesulfonyl)phenylamin:

Germ cell mutagenicity- : Tests on bacterial or mammalian cell cultures did not show  
Assessment mutagenic effects.

Germ cell mutagenicity- : No data available  
Assessment

### **Carcinogenicity**

No data available

Carcinogenicity - : No data available  
Assessment

### **Reproductive toxicity**

Effects on fertility : No data available

### Components:

tetrasodium 4-amino-5-hydroxy-3,6-bis[[4-[[2-(sulphonatooxy)ethylsulphonyl]phenyl]azo]naphthalene-2,7-disulphonate:

Effects on foetal : Species: Rat  
development Application Route: Oral  
General Toxicity Maternal: No observed adverse effect level:  
1.000 mg/kg body weight  
Result: No teratogenic effects

tetrasodium 4-amino-5-hydroxy-3,6-bis[[4-[[2-(sulphonatooxy)ethylsulphonyl]phenyl]azo]naphthalene-2,7-disulphonate:

Species: Rat  
Application Route: Oral  
General Toxicity Maternal: No observed adverse effect level:  
1.000 mg/kg body weight  
Result: No teratogenic effects

Reproductive toxicity - : No data available  
Assessment

### **STOT - single exposure**

No data available

# SAFETY DATA SHEET

According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization;  
Regulation on Safety data sheets regarding hazardous substances and mixtures".

**HUNTSMAN**

Enriching lives through innovation

## NOVACRON® NAVY S-G

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: -           |
| 1.0     | 05.07.2016     | 400001006664 | Date of first issue: 05.07.2016 |

### STOT - repeated exposure

No data available

### Repeated dose toxicity

#### Components:

tetrasodium 4-amino-5-hydroxy-3,6-bis[[4-[[2-(sulphonatooxy)ethyl]sulphonyl]phenyl]azo]naphthalene-2,7-disulphonate:

Species: Rat

NOAEL: 250 mg/kg

Application Route: Ingestion

Exposure time: 2.160 hMethod: Subchronic toxicity

mixture of: 4-amino-3-(4-ethenesulfonyl-2-sulfonatophenylazo)-5-hydroxy-6-(5-{4-chloro-6-[4-(2-sulfonatooxyethanesulfonyl)phenyl]amin:

Species: Rat, male and female

NOEL: 200 mg/kg

Application Route: oral (gavage)

Exposure time: 28 days Number of exposures: 7 days/week

Dose: 0, 50, 200 and 1000 mg/kg

Group: yes

Method: OECD Test Guideline 407

tetrasodium 4-amino-5-hydroxy-3,6-bis[[4-[[2-

(sulphonatooxy)ethyl]sulphonyl]phenyl]azo]naphthalene-2,7-disulphonate:

Species: Rat

NOAEL: 250 mg/kg

Application Route: Ingestion

Exposure time: 2.160 hMethod: Subchronic toxicity

mixture of: 4-amino-3-(4-ethenesulfonyl-2-sulfonatophenylazo)-5-hydroxy-6-(5-{4-chloro-6-[4-(2-sulfonatooxyethanesulfonyl)phenyl]amin:

Species: Rat, male and female

NOEL: 200 mg/kg

Application Route: oral (gavage)

Exposure time: 28 days Number of exposures: 7 days/week

Dose: 0, 50, 200 and 1000 mg/kg

Group: yes

Method: OECD Test Guideline 407

#### Components:

mixture of: 4-amino-3-(4-ethenesulfonyl-2-sulfonatophenylazo)-5-hydroxy-6-(5-{4-chloro-6-[4-(2-sulfonatooxyethanesulfonyl)phenyl]amin:

Repeated dose toxicity - : Causes serious eye damage.

Assessment No adverse effect has been observed in chronic toxicity tests.

mixture of: 4-amino-3-(4-ethenesulfonyl-2-sulfonatophenylazo)-5-hydroxy-6-(5-{4-chloro-6-[4-(2-sulfonatooxyethanesulfonyl)phenyl]amin:

Repeated dose toxicity - : Causes serious eye damage.

Assessment No adverse effect has been observed in chronic toxicity tests.

### Aspiration toxicity

No data available

# SAFETY DATA SHEET

According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization;  
Regulation on Safety data sheets regarding hazardous substances and mixtures".

**HUNTSMAN**

Enriching lives through innovation

## NOVACRON® NAVY S-G

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: -           |
| 1.0     | 05.07.2016     | 400001006664 | Date of first issue: 05.07.2016 |

### Experience with human exposure

General Information: No data available

Inhalation: No data available

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

#### Product:

Remarks: No data available

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Product:

|   |   |
|---|---|
| Toxicity to fish                                    | : LC50 : > 100 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203                             |
| Toxicity to daphnia and other aquatic invertebrates | : EC50 (Daphnia magna (Water flea)): > 100 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202 |
| Toxicity to bacteria                                | : IC50 : > 100 mg/l<br>Exposure time: 3 h<br>Method: OECD Test Guideline 209                              |

#### Components:

# SAFETY DATA SHEET

According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization;  
Regulation on Safety data sheets regarding hazardous substances and mixtures".

**HUNTSMAN**

Enriching lives through innovation

## NOVACRON® NAVY S-G

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: -           |
| 1.0     | 05.07.2016     | 400001006664 | Date of first issue: 05.07.2016 |

tetrasodium 4-amino-5-hydroxy-3,6-bis[[4-[[2-(sulphonatooxy)ethylsulphonyl]phenyl]azo]naphthalene-2,7-disulphonate:

Toxicity to fish : LC50 : > 100 mg/l  
Exposure time: 96 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 203

LC50 : > 100 mg/l  
Exposure time: 336 h  
Test Type: flow-through test  
Test substance: Fresh water  
Method: OECD Test Guideline 204

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 748 mg/l  
Exposure time: 48 h  
Test Type: semi-static test  
Test substance: Fresh water  
Method: OECD Test Guideline 202

Toxicity to algae : NOEC (Desmodesmus subspicatus (Scenedesmus subspicatus)): 3,2 mg/l  
Exposure time: 72 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 201

Toxicity to bacteria : EC50 : > 5.000 mg/l  
Exposure time: 3 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 1,25 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Test Type: semi-static test  
Test substance: Fresh water  
Method: OECD Test Guideline 211

mixture of: 4-amino-3-(4-ethenesulfonyl-2-sulfonatophenylazo)-5-hydroxy-6-(5-{4-chloro-6-[4-(2-sulfonatooxyethanesulfonyl)phenyl]amin

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203

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

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201

Toxicity to bacteria : IC50 (activated sludge): > 1.000 mg/l

# SAFETY DATA SHEET

According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization;  
Regulation on Safety data sheets regarding hazardous substances and mixtures".

**HUNTSMAN**

Enriching lives through innovation

## NOVACRON® NAVY S-G

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: -           |
| 1.0     | 05.07.2016     | 400001006664 | Date of first issue: 05.07.2016 |

Exposure time: 3 h  
Test Type: static test  
Method: OECD Test Guideline 209

### Ecotoxicology Assessment

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

tetrasodium 4-amino-5-hydroxy-3,6-bis[[4-[[2-(sulphonatooxy)ethyl]sulphonyl]phenyl]azo]naphthalene-2,7-disulphonate:

Toxicity to fish : LC50 : > 100 mg/l  
Exposure time: 96 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 203

LC50 : > 100 mg/l  
Exposure time: 336 h  
Test Type: flow-through test  
Test substance: Fresh water  
Method: OECD Test Guideline 204

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 748 mg/l  
Exposure time: 48 h  
Test Type: semi-static test  
Test substance: Fresh water  
Method: OECD Test Guideline 202

Toxicity to algae : NOEC (Desmodesmus subspicatus (Scenedesmus subspicatus)): 3,2 mg/l  
Exposure time: 72 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 201

Toxicity to bacteria : EC50 : > 5.000 mg/l  
Exposure time: 3 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 1,25 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Test Type: semi-static test  
Test substance: Fresh water  
Method: OECD Test Guideline 211

mixture of: 4-amino-3-(4-ethenesulfonyl-2-sulfonatophenylazo)-5-hydroxy-6-(5-{4-chloro-6-[4-(2-sulfonatooxyethanesulfonyl)phenyl]amin

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203

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

# SAFETY DATA SHEET

According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization;  
Regulation on Safety data sheets regarding hazardous substances and mixtures".

**HUNTSMAN**

Enriching lives through innovation

## NOVACRON® NAVY S-G

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: -           |
| 1.0     | 05.07.2016     | 400001006664 | Date of first issue: 05.07.2016 |

Test Type: static test  
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201

Toxicity to bacteria : IC50 (activated sludge): > 1.000 mg/l  
Exposure time: 3 h  
Test Type: static test  
Method: OECD Test Guideline 209

Ecotoxicology Assessment  
Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

### 12.2 Persistence and degradability

#### Product:

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 3 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301A

Biochemical Oxygen  
Demand (BOD) : 0 mgO<sub>2</sub>/g

Chemical Oxygen Demand  
(COD) : ca. 800 mgO<sub>2</sub>/g

#### Components:

tetrasodium 4-amino-5-hydroxy-3,6-bis[[4-[[2-  
(sulphonatooxy)ethyl]sulphonyl]phenyl]azo]naphthalene-2,7-disulphonate:

Biodegradability : Inoculum: activated sludge  
Concentration: 13 mg/l  
Biodegradation: 0 %  
Exposure time: 28 d  
Method: OECD Test Guideline 302B

Stability in water : Method: No information available.  
GLP: No information available.  
Remarks: see user defined free text

mixture of: 4-amino-3-(4-ethenesulfonyl-2-sulfonatophenylazo)-5-hydroxy-6-(5-{4-chloro-6-[4-  
(2-sulfonatooxyethanesulfonyl)phenyl]amin

Biodegradability : Test Type: aerobic  
Inoculum: activated sludge  
Concentration: 38,5 mg/l  
Result: Not readily biodegradable.  
Biodegradation: 3 %  
Related to: Dissolved organic carbon (DOC)

# SAFETY DATA SHEET

According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization;  
Regulation on Safety data sheets regarding hazardous substances and mixtures".

**HUNTSMAN**

Enriching lives through innovation

## NOVACRON® NAVY S-G

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: -           |
| 1.0     | 05.07.2016     | 400001006664 | Date of first issue: 05.07.2016 |

Exposure time: 28 d  
Method: OECD Test Guideline 301A

Test Type: aerobic  
Inoculum: activated sludge  
Concentration: 157,4 mg/l  
Result: Not inherently biodegradable.  
Biodegradation: 8 %  
Related to: Dissolved organic carbon (DOC)  
Exposure time: 28 d  
Method: OECD Test Guideline 302B

Biochemical Oxygen Demand (BOD) : 0 mgO<sub>2</sub>/g  
Incubation time: 5 d  
Method: ISO 5815

Chemical Oxygen Demand (COD) : 672 mgO<sub>2</sub>/g

Stability in water : Method: No information available.

Method: No information available.  
GLP: No information available.

Method: OECD Test Guideline 111  
GLP: No information available.

tetrasodium 4-amino-5-hydroxy-3,6-bis[[4-[[2-(sulphonatooxy)ethyl]sulphonyl]phenyl]azo]naphthalene-2,7-disulphonate:

Biodegradability : Inoculum: activated sludge  
Concentration: 13 mg/l  
Biodegradation: 0 %  
Exposure time: 28 d  
Method: OECD Test Guideline 302B

Stability in water : Method: No information available.  
GLP: No information available.  
Remarks: see user defined free text

mixture of: 4-amino-3-(4-ethenesulfonyl-2-sulfonatophenylazo)-5-hydroxy-6-(5-{4-chloro-6-[4-(2-sulfonatooxyethanesulfonyl)phenyl]amin-

Biodegradability : Test Type: aerobic  
Inoculum: activated sludge  
Concentration: 38,5 mg/l  
Result: Not readily biodegradable.  
Biodegradation: 3 %  
Related to: Dissolved organic carbon (DOC)  
Exposure time: 28 d  
Method: OECD Test Guideline 301A

Test Type: aerobic  
Inoculum: activated sludge  
Concentration: 157,4 mg/l  
Result: Not inherently biodegradable.  
Biodegradation: 8 %



# SAFETY DATA SHEET

According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization; Regulation on Safety data sheets regarding hazardous substances and mixtures".

**HUNTSMAN**

Enriching lives through innovation

## NOVACRON® NAVY S-G

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: -           |
| 1.0     | 05.07.2016     | 400001006664 | Date of first issue: 05.07.2016 |

Related to: Dissolved organic carbon (DOC)  
Exposure time: 28 d  
Method: OECD Test Guideline 302B

Biochemical Oxygen Demand (BOD) : 0 mgO<sub>2</sub>/g  
Incubation time: 5 d  
Method: ISO 5815

Chemical Oxygen Demand (COD) : 672 mgO<sub>2</sub>/g

Stability in water : Method: No information available.

Method: No information available.  
GLP: No information available.

Method: OECD Test Guideline 111  
GLP: No information available.

### 12.3 Bioaccumulative potential

#### Components:

tetrasodium 4-amino-5-hydroxy-3,6-bis[[4-[[2-(sulphonatooxy)ethylsulphonyl]phenyl]azo]naphthalene-2,7-disulphonate:  
Bioaccumulation : Species: Cyprinus carpio (Carp)  
Bioconcentration factor (BCF): < 11  
Remarks: Does not bioaccumulate.

Partition coefficient: n-octanol/water : log Pow: < -4,34

mixture of: 4-amino-3-(4-ethenesulfonyl-2-sulfonatophenylazo)-5-hydroxy-6-(5-{4-chloro-6-[4-(2-sulfonatooxyethanesulfonyl)phenylamin:  
Partition coefficient: n-octanol/water : log Pow: < -5,5 (20 °C)  
Method: Partition coefficient

tetrasodium 4-amino-5-hydroxy-3,6-bis[[4-[[2-(sulphonatooxy)ethylsulphonyl]phenyl]azo]naphthalene-2,7-disulphonate:  
Bioaccumulation : Species: Cyprinus carpio (Carp)  
Bioconcentration factor (BCF): < 11  
Remarks: Does not bioaccumulate.

Partition coefficient: n-octanol/water : log Pow: < -4,34

mixture of: 4-amino-3-(4-ethenesulfonyl-2-sulfonatophenylazo)-5-hydroxy-6-(5-{4-chloro-6-[4-(2-sulfonatooxyethanesulfonyl)phenylamin:  
Partition coefficient: n-octanol/water : log Pow: < -5,5 (20 °C)  
Method: Partition coefficient

### 12.4 Mobility in soil

#### Components:

# SAFETY DATA SHEET

According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization;  
Regulation on Safety data sheets regarding hazardous substances and mixtures".

**HUNTSMAN**

Enriching lives through innovation

## NOVACRON® NAVY S-G

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: -           |
| 1.0     | 05.07.2016     | 400001006664 | Date of first issue: 05.07.2016 |

tetrasodium 4-amino-5-hydroxy-3,6-bis[[4-[[2-(sulphonatooxy)ethyl]sulphonyl]phenyl]azo]naphthalene-2,7-disulphonate:  
Distribution among : Koc: < 1,25Method: Directive 67/548/EEC, Annex V, C.19  
environmental compartments

tetrasodium 4-amino-5-hydroxy-3,6-bis[[4-[[2-(sulphonatooxy)ethyl]sulphonyl]phenyl]azo]naphthalene-2,7-disulphonate:  
Distribution among : Koc: < 1,25Method: Directive 67/548/EEC, Annex V, C.19  
environmental compartments

### 12.5 Results of PBT and vPvB assessment

Not relevant

### 12.6 Other adverse effects

#### Product:

Adsorbed organic bound : < .1 %  
halogens (AOX) Test substance: Chlorine

Additional ecological : No data available  
information

#### Components:

tetrasodium 4-amino-5-hydroxy-3,6-bis[[4-[[2-(sulphonatooxy)ethyl]sulphonyl]phenyl]azo]naphthalene-2,7-disulphonate:

Adsorbed organic bound : 0 %  
halogens (AOX)

tetrasodium 4-amino-5-hydroxy-3,6-bis[[4-[[2-(sulphonatooxy)ethyl]sulphonyl]phenyl]azo]naphthalene-2,7-disulphonate:

Adsorbed organic bound : 0 %  
halogens (AOX)

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Do not dispose of waste into sewer.  
Do not contaminate ponds, waterways or ditches with  
chemical or used container.  
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.

## SECTION 14: Transport information

#### **IATA**

Not regulated as dangerous goods

# SAFETY DATA SHEET

According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization; Regulation on Safety data sheets regarding hazardous substances and mixtures".

**HUNTSMAN**

Enriching lives through innovation

## NOVACRON® NAVY S-G

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: -           |
| 1.0     | 05.07.2016     | 400001006664 | Date of first issue: 05.07.2016 |

### IMDG

Not regulated as dangerous goods

### ADR

Not regulated as dangerous goods

### RID

Not regulated as dangerous goods

### 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

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

|       |  |
|-------|--|
| TSCA  | : On the inventory, or in compliance with the inventory                                      |
| DSL   | : This product contains one or several components that are not on the Canadian DSL nor NDSL. |
| AICS  | : Not in compliance with the inventory   |
| NZIoC | : Not in compliance with the inventory   |
| ENCS  | : Low volume exemption   |
| 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  | : Not in compliance with the inventory   |

#### Inventories

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

# SAFETY DATA SHEET

According to 13 December 2014, No:29204, "Ministry of Environment and Urbanization;  
Regulation on Safety data sheets regarding hazardous substances and mixtures".

**HUNTSMAN**

Enriching lives through innovation

## NOVACRON® NAVY S-G

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: -           |
| 1.0     | 05.07.2016     | 400001006664 | Date of first issue: 05.07.2016 |

### SECTION 16: Other information

#### Full text of R-Phrases

|        |   |
|--------|---|
| R41    | : Risk of serious damage to eyes.                         |
| R42/43 | : May cause sensitisation by inhalation and skin contact. |
| R45    | : May cause cancer.                                       |

#### Full text of H-Statements

|      |  |
|------|--|
| H317 | : May cause an allergic skin reaction.                                       |
| H318 | : Causes serious eye damage.   |
| H334 | : May cause allergy or asthma symptoms or breathing difficulties if inhaled. |

#### Full text of other abbreviations

|             |                             |
|-------------|-----------------------------|
| Eye Dam.    | : Serious eye damage        |
| Resp. Sens. | : Respiratory sensitisation |
| Skin Sens.  | : Skin sensitisation        |

The information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

The trademarks above are the property of Huntsman Corporation or an affiliate thereof.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE.