

## SAFETY DATA SHEET

## Sirius Red 0.1% in Saturated Picric Acid

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

## 1.1. Product identifier

## Trade name

Sirius Red 0.1% in Saturated Picric Acid

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

## Relevant identified uses of the substance or mixture

Laboratory use

Restricted to professional users.

## Use descriptors (REACH)

Product category	Description
PC 21	Laboratory Chemicals

## Uses advised against

None known.

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

## Company and address

**Solveco AB**

Tallbacksgatan 10

S-195 72 Rosersberg

Sweden

T: +46 (0)8 732 72 75

F: +46 (0)8 732 72 76

<http://www.solveco.se>

## Contact person

Habib Hourani

## E-mail

[info@solveco.se](mailto:info@solveco.se)

## Revision

04/12/2023

## SDS Version

1.0

## 1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service).

See section 4 "First aid measures".

## SECTION 2: Hazards identification

## 2.1. Classification of the substance or mixture

Expl. 1.1; H201, Explosive; mass explosion hazard.

## 2.2. Label elements

## Hazard pictogram(s)



## Signal word

Danger

## Hazard statement(s)

Explosive; mass explosion hazard. (H201)

## Precautionary statement(s)

General

-

#### Prevention

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)  
 Keep wetted with water/ethanol/petroleum ether. (P230)  
 Keep only in original packaging. (P234)  
 Do not subject to grinding/shock/friction. (P250)

#### Response

In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives.  
 (P370+P372+P380+P373)

#### Storage

-

#### Disposal

-

#### Hazardous substances

2,4,6-trinitrophenol;picric acid  
 Hexasodium 7,7'-(carbonyldiimino)bis[4-hydroxy-3-[[2-sulphonato-4-[(4-sulphonatophenyl)azo]phenyl]azo]naphthalene-2-sulphonate]

#### Additional labelling

EUH001, Explosive when dry.

### 2.3. Other hazards

#### Additional warnings

May form combustible dust concentrations in air.

Take action to prevent static discharges.

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable. This product is a mixture.

### 3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
2,4,6-trinitrophenol;picric acid	CAS No.: 88-89-1 EC No.: 201-865-9 UK-REACH: Index No.: 609-009-00-X	1-2%	EUH001 Expl. 1.1, H201 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331	[1]

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

#### Other information

[1] European occupational exposure limit.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet.  
 Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

#### Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

#### Skin contact

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

#### Eye contact

If in eyes: Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Remove contact lenses. Seek medical assistance and continue flushing during transport.

#### Ingestion

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.

In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

#### Burns

Rinse with water until pain stops then continue to rinse for 30 minutes.

#### 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

Treat symptomatically.

#### Information to medics

Bring this safety data sheet or the label from this product.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

DO NOT attempt firefighting, risk of explosion.

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

Explosion: Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Risk of explosion by shock, friction, fire or other sources of ignition.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Nitrogen oxides (NO<sub>x</sub>)

Carbon oxides (CO / CO<sub>2</sub>)

#### 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Restrict the number of action force members in the hazard area. Do not inhale explosion and combustion gases. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Measures in case of adjacent fire (Fire has not yet reached product): Co-ordinate fire-fighting measures to the fire surroundings. Use water spray jet to protect personnel and to cool endangered containers. Move undamaged containers from immediate hazard area if it can be done safely.

Measures in case of product fire (Fire has just reached the product or is about to reach it): No fire-fighting attempts, risk of explosion. Immediately evacuate danger zone and seek safe cover.

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Avoid contact with the substance. Wear suitable protective equipment before handling. Follow emergency procedures. Evacuate the danger area and notify your supervisor. Ask for assistance from a competent person.

For emergency responders: Close off the hazard area. Ask for assistance from a competent person.

Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.

Ensure adequate ventilation, especially in confined areas.

Contaminated areas may be slippery.

#### 6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

Keep unauthorized persons away from the spill

#### 6.3. Methods and material for containment and cleaning up

Use only non-sparking tools. Clean up manually and place in appropriate containers for disposal.

Collect spills carefully. Moist the material with water in order to prevent the formation and propagation of dust.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

#### 6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Only to be handled by authorised persons. The explosives must be under supervision and kept away from unauthorised persons. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not subject to grinding, shock, friction. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed outside of the workplace. Wash hands before breaks and after work.

May form combustible dust concentrations in air.

Take action to prevent static discharges.

Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

See section 8 "Exposure controls/personal protection" for information on personal protection.

### 7.2. Conditions for safe storage, including any incompatibilities

Store in original packaging if possible. Explosives and explosive articles should be stored in accordance with the licence issued by the relevant national authority. Store under cool conditions. Store under dry conditions. Stable under normal storage conditions. Maximum storage quantity should be agreed with national authorities. Store in a well-ventilated place. Store in a closed container.

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Avoid the suspension of dust in the air.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Use non-sparking tools.

#### Recommended storage material

Always store in containers of the same material as the original container.

#### Storage temperature

No specific requirements

#### Incompatible materials

Reducing agent, Acids, Alkalis, Combustible products, Metal powders, Chromates, Zinc, Copper, Copper alloys, Chlorates, Nitrites.

### 7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

2,4,6-trinitrophenol;picric acid

Long term exposure limit (8 hours) (mg/m<sup>3</sup>): 0.1

Short term exposure limit (15 minutes) (mg/m<sup>3</sup>): 0.3

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002. EH40/2005 Workplace exposure limits (Fourth Edition 2020).

#### DNEL

No data available.

#### PNEC

No data available.

### 8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

#### General recommendations

When transferring the materials, dust clouds should be kept at an absolute minimum. Handling should be slow and deliberate. The materials should be transferred from one container to another using a non-sparking, conductive metal scoop.

When mixing the material with other dry ingredients, frictional heat should be avoided. The best type of mixer for a dry mixing operation is one that contains no moving parts, but rather affects a tumbling action, such as a conical blender. Introduction of an inert atmosphere in the blender is highly recommended since dust clouds are generated. All equipment must be well grounded.

Smoking, drinking and consumption of food is not allowed in the work area.

#### Exposure scenarios

There are no exposure scenarios implemented for this product.

#### Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See

occupational hygiene limit values above.

#### Appropriate technical measures

Airborne gas and dust concentrations must be kept at a minimum. Provide efficient mechanical ventilation. If not possible use suitable respiratory equipment.

It is recommended that all dust control equipment such as local exhaust ventilation contain an explosion suppression system.

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked.

Apply standard precautions during use of the product. Avoid inhalation of vapours.

#### Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

#### Measures to avoid environmental exposure

No specific requirements.

#### Individual protection measures, such as personal protective equipment


##### Generally

Use only UKCA marked protective equipment.


##### Respiratory Equipment

No specific requirements


##### Skin protection

Recommended	Type/Category	Standards	
Wear appropriate protection clothing, e.g. coveralls in polypropylene or working clothes in cotton or polyester.	-	-	

##### Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Butyl	-	-	EN374-2, EN374-3, EN388, EN421	

##### Eye protection

Type	Standards	
Safety glasses with side shields.	EN166	

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Physical state

Liquid

#### Colour

Red

#### Odour / Odour threshold

No data available

#### pH

Testing not relevant or not possible due to the nature of the product.

#### Density (g/cm<sup>3</sup>)

1.005

#### Kinematic viscosity

Testing not relevant or not possible due to the nature of the product.

#### Particle characteristics

Does not apply to liquids.

#### Phase changes

**Melting point/Freezing point (°C)**

&lt;0

**Softening point/range (waxes and pastes) (°C)**

Does not apply to liquids.

**Boiling point (°C)**

100

**Vapour pressure**

Testing not relevant or not possible due to the nature of the product.

**Relative vapour density**

Testing not relevant or not possible due to the nature of the product.

**Decomposition temperature (°C)**

Testing not relevant or not possible due to the nature of the product.

**Data on fire and explosion hazards****Flash point (°C)**

No data available

**Flammability (°C)**

The material is not combustible.

**Auto-ignition temperature (°C)**

No data available

**Lower and upper explosion limit (% v/v)**

No data available

**Solubility****Solubility in water**

Testing not relevant or not possible due to the nature of the product.

**n-octanol/water coefficient**

Testing not relevant or not possible due to the nature of the product.

**Solubility in fat (g/L)**

Testing not relevant or not possible due to the nature of the product.

**9.2. Other information****Formation of explosible dust/air mixtures**

Yes

**Other physical and chemical parameters**

No data available.

**Oxidizing properties**

No data available

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

Product is an explosive.

**10.2. Chemical stability**

The product is stable under the conditions, noted in section 7 "Handling and storage".

**10.3. Possibility of hazardous reactions**

Explosive when dry.

Product is an explosive.

**10.4. Conditions to avoid**

Heating may cause an explosion.

Mechanical influences (e.g. shock, pressure, impact, friction). Fire, sparks or other ignition sources.

Avoid the suspension of dust in the air.

MUST NOT BE ALLOWED TO DRY, EXPLOSIVE WHEN DRY!

**10.5. Incompatible materials**

Reducing agent, Acids, Alkalis, Combustible products, Metal powders, Chromates, Zinc, Copper, Copper alloys, Chlorates, Nitrites.

**10.6. Hazardous decomposition products**Nitrogen oxides (NO<sub>x</sub>)Carbon oxides (CO / CO<sub>2</sub>)**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

#### Acute toxicity

Product/substance	2,4,6-trinitrophenol;picric acid
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	200 mg/kgbw

#### Skin corrosion/irritation

Based on available data, the classification criteria are not met.

#### Serious eye damage/irritation

Based on available data, the classification criteria are not met.

#### Respiratory sensitisation

Based on available data, the classification criteria are not met.

#### Skin sensitisation

Based on available data, the classification criteria are not met.

#### Germ cell mutagenicity

Based on available data, the classification criteria are not met.

#### Carcinogenicity

Based on available data, the classification criteria are not met.

#### Reproductive toxicity

Based on available data, the classification criteria are not met.

#### STOT-single exposure

Based on available data, the classification criteria are not met.

#### STOT-repeated exposure

Based on available data, the classification criteria are not met.

#### Aspiration hazard

Based on available data, the classification criteria are not met.

#### 11.2. Information on other hazards

##### Long term effects

None known.

##### Endocrine disrupting properties

This mixture/product does not contain any substances known to have hormone-disrupting properties in relation to health.

##### Other information

None known.

## SECTION 12: Ecological information

#### 12.1. Toxicity

Product/substance	2,4,6-trinitrophenol;picric acid
Species:	Fish
Duration:	96 hours
Test:	LC50
Result:	110 mg/L

Product/substance	2,4,6-trinitrophenol;picric acid
Species:	Daphnia (Daphnia magna)
Duration:	48 hours
Test:	EC50
Result:	85 mg/L

Product/substance	2,4,6-trinitrophenol;picric acid
Species:	Algae (Scenedesmus subspicatus)
Duration:	72 hours
Test:	IC50
Result:	580 mg/L

#### 12.2. Persistence and degradability

No data available.

#### 12.3. Bioaccumulative potential

Product/substance	2,4,6-trinitrophenol;picric acid
Potential bioaccumulation:	No data available.
LogPow:	2,03

BCF: 2.4

**12.4. Mobility in soil**

No data available.

**12.5. Results of PBT and vPvB assessment**

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

**12.6. Endocrine disrupting properties**

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

**12.7. Other adverse effects**

None known.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

Product is covered by the regulations on hazardous waste. (\*)

HP 1 - Explosive

HP 15 - Explosive when dry

Dispose of contents/container to an approved waste disposal plant.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

**EWC code**

16 04 03\* Other waste explosives

**Contaminated packing**

Packaging containing residues of the product must be disposed of similarly to the product.

**SECTION 14: Transport information**

14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env* *	Other information:
ADR	Not subject to transport regulations. -		-	No	See below for additional information.
IMDG	Not subject to transport regulations. -		-	No	See below for additional information.
IATA	Not subject to transport regulations. -		-	No	See below for additional information.

\* Packing group

\*\* Environmental hazards

**Additional information**

Not dangerous goods according to ADR, IATA and IMDG.

**14.6. Special precautions for user**

Product is an explosive.

**14.7. Maritime transport in bulk according to IMO instruments**

No data available.

**SECTION 15: Regulatory information**

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Restrictions for application**

Restricted to professional users.

People under the age of 18 shall not be exposed to this product.

**Demands for specific education**

No specific requirements.



#### SEVESO - Categories / dangerous substances

P1a - EXPLOSIVES, Qualifying quantity (lower-tier): 10 tonnes / (upper-tier): 50 tonnes

#### Additional information

Not applicable.

#### Sources

Control of Major Accident Hazards (COMAH) Regulations 2015.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law.

Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

#### 15.2. Chemical safety assessment

No

### SECTION 16: Other information

#### Full text of H-phrases as mentioned in section 3

H201, Explosive when dry.

H201, Explosive; mass explosion hazard.

H301, Toxic if swallowed.

H311, Toxic in contact with skin.

H331, Toxic if inhaled.

#### The full text of identified uses as mentioned in section 1

PC 21 = Laboratory Chemicals

#### Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CE = Conformité Européenne (European conformity)

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

CSA = Chemical Safety Assessment

CSR = Chemical Safety Report

DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level

EINECS = European Inventory of Existing Commercial chemical Substances

ES = Exposure Scenario

EUH statement = CLP-specific Hazard statement

EuPCS = European Product Categorisation System

EWC = European Waste Catalogue

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IARC = International Agency for Research on Cancer (IARC)

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

OECD = Organisation for Economic Co-operation and Development

PBT = Persistent, Bioaccumulative and Toxic

PNEC = Predicted No Effect Concentration

RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail

RRN = REACH Registration Number

SCL = A specific concentration limit

SVHC = Substances of Very High Concern

STOT-RE = Specific Target Organ Toxicity - Repeated Exposure

STOT-SE = Specific Target Organ Toxicity - Single Exposure

TWA = Time weighted average

UN = United Nations

UVBC = Unknown or variable composition, complex reaction products or of biological materials

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bioaccumulative

#### Additional information

The classification of the mixture in regard to physical hazards has been based on experimental data.

#### The safety data sheet is validated by

Christian Andersson

#### Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: GB-en