

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 13.07.2017

Version number 1

Revision: 13.07.2017

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

1.1. Product identifier

Trade name: **BrilLanCe®390S**

Article code: B390S LaBr3(Ce,Sr)

Registration number:

The registration number is not available, since the substance/mixture or its use is excluded from registration according to article 2 of the REACH Regulation (EC) No. 1907/2006, the annual tonnage does not require a registration or the registration is planned for a later date.

1.2. Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.

Application of the substance / the mixture: Scintillating crystals for radiations detection.

Uses advised against: Other uses than the identified uses indicated above.

1.3. Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Saint-Gobain Cristaux & Détecteurs
104, Route de Larchant
F-77140 Saint-Pierre-Les-Nemours
Telephone: 0033 (0) 1 64 45 10 10
Fax: 0033 (0) 1 64 45 10 01

Further information obtainable from: customer.service.SGCD@saint-gobain.com

1.4. Emergency telephone number

Centre anti poison et de toxicovigilance (Intoxication centre)
Phone: Paris: +33 (0) 1 40 05 48 48, Marseille: +33 (0) 1 91 75 25 25

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008:



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

(Contd. on page 2)

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 13.07.2017

Version number 1

Revision: 13.07.2017

Trade name: **BrilLanCe®390S**

STOT SE 3 H335 May cause respiratory irritation.

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008:

The product is classified and labelled according to the CLP regulation.

Hazard pictograms:



GHS07

Signal word: Warning

Hazard-determining components of labelling:

lanthanum tribromide

cerium tribromide

Hazard statements:

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Precautionary statements:

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves / eye protection / face protection.

P302+P352 IF ON SKIN: Wash with plenty of water.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a POISON CENTER/doctor if you feel unwell.

P321 Specific treatment (see on this label).

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash it before reuse.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 3)

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 13.07.2017

Version number 1

Revision: 13.07.2017

Trade name: **BrillanCe®390S**

2.3. Other hazards

Results of PBT and vPvB assessment:

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 13536-79-3 EINECS: 236-896-7	lanthanum tribromide	Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	50-100%
CAS: 14457-87-5 EINECS: 238-447-0	cerium tribromide	Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	2.5-<10%
CAS: 10476-81-0 EINECS: 233-969-5	strontium bromide	Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	<0,1%

Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation:

Supply fresh air; consult doctor in case of complaints.

In case of unconsciousness place patient stably in side position for transportation.

In case of irregular breathing or respiratory arrest provide artificial respiration.

In case of breathing difficulties administer oxygen.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

After eye contact:

Protect unharmed eye.

Rinse opened eye for several minutes under running water.

Remove contact lenses, if present and easy to do. Continue rinsing.

Seek medical treatment.

After swallowing:

Rinse mouth.

Do not induce vomiting; call for medical help immediately.

(Contd. on page 4)

Printing date: 13.07.2017

Version number 1

Revision: 13.07.2017

Trade name: **BrilLanCe®390S**

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

Irritating to eyes, respiratory system and skin.

Coughing

Breathing difficulty

Prolonged or repetitive skin contact may cause skin defatting or dermatitis.

Erythema (reddening)

Inflammation of the skin

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

First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing agents:

Foam

Fire-extinguishing powder

Carbon dioxide (CO₂)

For safety reasons unsuitable extinguishing agents:

Water

Water with full jet

5.2. Special hazards arising from the substance or mixture

The product is non flammable.

In certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:

Harmful pyrolysis products

The product will oxidize in air at temperatures > 300 °C, evolving bromine gas (Br₂).

The product reacts with water at temperatures > 150 °C, evolving hydrobromic acid (HBr).

5.3. Advice for firefighters

Protective equipment:

Do not inhale explosion gases or combustion gases.

Wear a self-contained breathing apparatus and chemical resistant suit.

Additional information:

Move undamaged containers from immediate hazard area if it can be done safely.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid any contact with eyes or skin.

(Contd. on page 5)

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 13.07.2017

Version number 1

Revision: 13.07.2017

Trade name: **BrillanCe®390S**

Avoid formation of dust.
Do not inhale dust / smoke / mist.
Ensure adequate ventilation.
Wear protective clothing.
Remove persons from danger area.
Keep people at a distance and stay on the windward side.

6.2. Environmental precautions

Do not allow to enter sewers/ surface or ground water.
Dumping into the environment must be prevented.

6.3. Methods and material for containment and cleaning up

Remove mechanically, placing in appropriate containers for disposal.
Use approved industrial vacuum cleaner for removal.
Ensure adequate ventilation.
Dispose of the material collected according to regulations.

6.4. Reference to other sections

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with eyes or skin. Wear personal protective equipment.
Prevent formation of dust.
Do not breathe dust/fume/gas/mist/vapours/spray.
Provide adequate ventilation as well as local exhaustion at critical locations.

Information about fire - and explosion protection: Usual measures for fire prevention.

7.2. Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:
Access is only to be granted to authorised personnel.
Store only in the original container.

Information about storage in one common storage facility:

Keep away from food, drink and animal feeding stuffs.
Do not store together with oxidising and acidic materials.
Store away from water.

(Contd. on page 6)

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 13.07.2017

Version number 1

Revision: 13.07.2017

Trade name: **BrillanCe®390S**

Further information about storage conditions:

Store in cool, dry conditions in well sealed containers.

Protect from heat and direct sunlight.

Protect from humidity and water.

Keep the packaging dry and well sealed to prevent contamination and adsorption of dampness.

Storage class: 13 Incombustible solids (DE TRGS 510)

7.3. Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities:

Technical measures and the application of adequate working methods take priority over the use of personal protection equipment.

8.1. Control parameters

Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: The lists valid during the making were used as basis.

8.2. Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Avoid contact with the eyes and skin.

Do not inhale dust / smoke / mist.

Ensure that washing facilities are available at the work place.

Wash hands before breaks and at the end of work.

Do not eat, drink, smoke or sniff while working.

Store protective clothing separately.

The usual precautionary measures are to be adhered to when handling chemicals.

Respiratory protection:

If technical suction or ventilation measures are not possible or are insufficient, protective breathing apparatus must be worn.

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, a self-contained breathing apparatus must be used!

Suitable respiratory protective equipment:

(Contd. on page 7)

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 13.07.2017

Version number 1

Revision: 13.07.2017

Trade name: **BrillanCe®390S**

Half-mask (EN 140) with filter FFP1 or P2 (EN 149)

Protection of hands:

Tested protective gloves are to be worn. When handling chemical substances, chemical protective gloves must be worn with CE label including a four digit code. Type of chemical protective gloves to choose depends on the concentration and quantity of dangerous substances as well as on work place specifications. In the cases of special applications, it is recommended to check the chemical resistance with the manufacturer of the gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves:

Recommendation:

Nitrile rubber, NBR

Butyl rubber, BR

Recommended thickness of the material: ≥ 0.35 mm

Penetration time: > 480 min

(EN 374)

Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Tightly sealed goggles

(EN 166)

Body protection:

Only wear fitting, comfortable and clean protective clothing.

Recommendation:

Protective work clothing

Boots

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Information

Appearance:

Form:	Solid Crystalline
Colour:	White
Odour:	No information available.
Odour threshold:	Not determined.
pH-value:	Not applicable.

(Contd. on page 8)

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date: 13.07.2017

Version number 1

Revision: 13.07.2017

Trade name: **BrillanCe®390S**

Change in condition

Melting point/freezing point: 820 °C
Initial boiling point and boiling range: Undetermined.

Flash point: Not applicable.

Flammability (solid, gas): Not determined.

Ignition temperature: Not determined.

Decomposition temperature: Not determined.

Auto-ignition temperature: Product is not selfigniting.

Explosive properties: Product does not present an explosion hazard.

Vapour pressure: Not applicable.

Density at 25 °C: 5.08 g/cm³

Relative density: Not determined.

Vapour density: Not applicable.

Evaporation rate: Not applicable.

Solubility in / Miscibility with
water at 25 °C: > 100 g/l

Partition coefficient: n-octanol/water: Not determined.

Viscosity:

Dynamic: Not applicable.

Kinematic: Not applicable.

9.2. Other information Hygroscopic crystal.
Molecular weight: 378.62 g/mol

SECTION 10: Stability and reactivity

10.1. Reactivity The product is stable under standard conditions (temperature, pressure) of storage and handling.

(Contd. on page 9)

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 13.07.2017

Version number 1

Revision: 13.07.2017

Trade name: **BrilLanCe®390S**

10.2. Chemical stability The product is hygroscopic.

10.3. Possibility of hazardous reactions

Risk of dust explosion if enriched with fine dust in the presence of air.

The product will oxidize in air at temperatures > 300 °C, evolving bromine gas (Br₂).

The product reacts with water at temperatures > 150 °C, evolving hydrobromic acid (HBr).

10.4. Conditions to avoid

Avoid generation of dust.

Heat

Water/ moisture

10.5. Incompatible materials

Oxidizing agents

Acids

10.6. Hazardous decomposition products

In case of fire, the following products can be released:

Bromine compounds

Danger of forming toxic pyrolysis products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

Primary irritant effect:

Skin corrosion/irritation:

Prolonged/repetitive skin contact may cause skin defatting or dermatitis.

Causes skin irritation.

Serious eye damage/irritation:

Causes serious eye irritation.

Respiratory tract: May cause respiratory irritation.

Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):

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:

May cause respiratory irritation.

(Contd. on page 10)

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 13.07.2017

Version number 1

Revision: 13.07.2017

Trade name: **BrillanCe®390S**

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.

SECTION 12: Ecological information

12.1. Toxicity

Aquatic toxicity: No relevant information available.

12.2. Persistence and degradability

Methods for determination of degradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential No indication of bio-accumulation potential.

12.4. Mobility in soil No further relevant information available.

General notes: Avoid transfer into the environment.

12.5. Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6. Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recommendation:

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Waste disposal according to official state regulations.

Hand over to officially registered waste disposal company.

Uncleaned packaging:

Recommendation:

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1. UN-Number

ADR, ADN, IMDG, IATA

Void.

(Contd. on page 11)

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date: 13.07.2017

Version number 1

Revision: 13.07.2017

Trade name: **BrillanCe®390S**

14.2. UN proper shipping name ADR, ADN, IMDG, IATA	Void.
14.3. Transport hazard class(es) ADR, ADN, IMDG, IATA Class	Void.
14.4. Packing group ADR, IMDG, IATA	Void.
14.5. Environmental hazards	Not applicable.
14.6. Special precautions for user	Not applicable.
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
UN "Model Regulation":	Void.

SECTION 15: Regulatory information

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

EU-Regulations

Regulation (EC) No 1907/2006 (REACH)

Regulation (EC) No 1272/2008 (CLP)

Regulation 98/24/EC (employee health protection)

Directive 2012/18/EU

Named dangerous substances - ANNEX I: None of the ingredients is listed.

National regulations:

Information about limitation of use:

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

Employment restrictions concerning women of child-bearing age must be observed.

Other regulations, limitations and prohibitive regulations: National legislation has to be observed!

15.2. Chemical safety assessment A Chemical Safety Assessment has not been carried out.

(Contd. on page 12)

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 13.07.2017

Version number 1

Revision: 13.07.2017

Trade name: **BrillanCe®390S**

SECTION 16: Other information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

Relevant phrases:

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Training hints:

The product should only be handled by persons, who were informed sufficiently about the nature of the product and about the necessary safety precautions.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Sources: Data arise from reference works and literature.