SAFETY DATA SHEET

This Safety Data Sheet contains information concerning the potential risks to those involved in handling, transporting and working with this material, as well as describing potential risks to the environment. This information must be made available to those who may come into contact with the material or are responsible for the use of the material.

This Safety Data Sheet is prepared in accordance with formatting described in the REACH Regulation (EC) No 1907/2006, in CLP Regulation (EC) No 1272/2008 and in Annex I of the Commission Regulation (EU) No 2015/830.

SECTION 1. Identification of the substances/mixture and of the company/undertaking

1.1 Product Identifier

Product Name: **Amyloid Stain (Puchtler) Congo Red**
Product Number: **HS200**
Brand: **TCS Biosciences**
IUPAC name **not determined**

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

Identified uses: For professional use only.

1.3 Details of the supplier of the safety data sheet

Company: TCS Biosciences Ltd
Botolph Claydon, Buckingham,
MK18 2LR, UK
Telephone: +44 (0) 1296 714222
Email address: sales@tcsgroup.co.uk
Web address: www.tcsbiosciences.co.uk

EC Representative: TCS Biosciences Europe B.V.,
Provincial Weg 6,
Kornhom,
Netherlands.

1.4 Emergency telephone number

+44 (0)1296 714222 only available during the following office hours:
Monday – Thursday 8:30 – 17:00 GMT/BST
Friday 9:00 – 15:00 GMT/BST

SECTION 2. Hazards Identification

2.1 Classification of the substance or mixture

2.1.1 Classification in accordance with the Classification Labelling and Packaging Regulation EC (no) 1272/2008:

Flammable liquid (Category 2)
Carcinogenicity (Category 1B)
Acute inhalation toxicity, (Category 4)
Specific Target Organ Toxicity - Single Exposure Category 2

2.2 Label Elements

2.2.1 Labelling in accordance with the Classification Labelling and Packaging Regulation EC (no) 1272/2008:

Pictograms:

Signal word: **Danger**

Hazard Statements
H225 Highly flammable liquid and vapour
H332 Harmful if inhaled.
H350 May cause cancer
H371 May cause damage to the optic nerve & central nervous system by the oral route.

Precautionary Statement(s)
P280 Wear protective gloves/protective clothing/eye protection/face protection
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P309+P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

2.3 Other hazards: Dyes and Stains by their physical nature may result in permanent staining if in contact with skin and clothing.
No substance contained in this product meets the criteria for vPvB and PBT according to Regulation (EC) No 1907/2006, Annex XIII; and, no substance within this product is identified as having endocrine disrupting properties according to Regulation (EU) 2017/2100.

SECTION 3. Composition/Information on Ingredients

3.2 Mixtures
Synonyms: None

Component	EC-No	CAS-No	Concentration	Classification in accordance with Regulation (EC) No 1272/2008
Ethanol	200-578-6	64-17-5	70-80%	Flam.Liq 2 ; H225
Methanol	200-659-6	67-56-1	3.5-4.0%	Flam. Liq. 2; H225; AcuteTox.3; H331,H301,H311 STOT SE 1;H370
Congo Red	209-358-4	573-58-0	0.15-0.20%	Carc 1B; H350, Repr 2; H361d
Included in the Candidate List of Substances of Very High Concern (SVHC) according to Article 59 to Regulation (EC) No. 1907/2006 (REACH)				

Refer to section 16 for additional classification information.

SECTION 4. First Aid Measures

4.1 Description of first aid measures
If exposed keep patient calm and seek immediate medical attention. Show this safety data sheet to doctor/physician in attendance.

If inhaled
Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Get medical advice/attention.

In case of skin contact
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

In case of eye contact
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists get medical advice/attention.

If swallowed
Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. Rinse out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical advice/attention..

4.2 Most important symptoms and effects, both acute and delayed
No data available.

4.3 Indication of immediate medical attention and special treatment needed
No data available.

SECTION 5. Fire-Fighting Measures

5.1 Suitable extinguishing media
Use alcohol-resistant foam or fine water spray, dry chemical powder or carbon dioxide. For large fires immediately alert fire emergency services. Evacuate personnel to safe area.

5.2 Special hazards arising from the substance or mixture
May emit toxic fumes under fire: Carbon oxides, Nitrogen oxide.

5.3 Precautions for fire-fighters
Avoid contact with skin and eyes. Wear self-contained breathing apparatus /protective clothing. Cool surrounding with water spray. Heating causes a rise in pressure, risk of bursting /explosion. Vapour is slightly heavier than air. Beware of backfire. Stay on upwind side. Use only explosion proved equipment. In case of violent hazardous effect: Wear appropriate tightly sealed suit.

5.4 Further information
Class of fire: B Liquid or melting substances.

SECTION 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures
Observe all warning labels on container. Ensure adequate ventilation. Avoid breathing vapours, mist or gas. Wear respiratory protection and other personal protective equipment provided.
Shut off all naked flames and other sources of ignition. Vapour is slightly heavier than air, and may accumulate in low areas to form explosive concentrations. Prevent build-up of electrostatic charge. Wash hands thoroughly after handling.

6.2 Environmental precautions
Avoid discharge into the environment. Do not let undiluted product or large quantities enter drains or water course. Prevent further leakage or spillage where safe to do so. Inform responsible authorities as appropriate.

6.3 Methods and materials for containment and cleaning up
Absorb spillage with appropriate absorbent material e.g. vermiculite or sand; and dispose into suitably labelled closed containers for disposal according to local regulations. Use non-sparking tools. If using a vacuum cleaner ensure unit is spark-proof /electrically protected. Avoid ignition of vapour. Wash spillage site with water and appropriate detergent.

6.4 Reference to other sections
For disposal refer to section 13.

SECTION 7. Handling and Storage

7.1 Precautions for safe handling

Observe all warning labels on container. Use only closed apparatus. Ensure adequate ventilation. Avoid breathing vapours, mist or gas. Wear appropriate personal protective equipment provided. Shut off all naked flames and other sources of ignition. Take precaution to avoid exposure. Use leak-proof equipment with exhaust for refilling or transfer. Avoid splashing. Use solvent resistant utensils. Prevent build-up of electrostatic charge. Beware of vapours (slightly heavier than air) accumulating in low areas to form explosive concentrations. Wash hands thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated cool place. Containers which are opened must be carefully resealed and kept upright to prevent leakage..

7.3 Specific end uses

Recommend restriction to professional users only.

SECTION 8. Exposure Controls//Personal Protection

8.1 Control parameters

Components with workplace control parameters

TWA Time Weighted Average Concentration (Long Term Exposure Limit)
STEL Short Term Exposure Limit
LTEL Long Term Exposure Limit

Component	CAS-No	Value	Control Parameters	Basis
Methanol	67-56-1	TWA LTEL – 8h STEL – 15mins	200 ppm – 266mg/m^3 250 ppm – 333g/m^3	UK.EH40 WEL- Workplace Exposure limit
Ethanol	64-17-5	TWA LTEL – 8h	1000ppm 1920 mg/m^3	UK.EH40 WEL- Workplace Exposure limit

8.1.3 DNEL's Workers

Component	Route of Exposure	Acute Effects local	Acute Effects systemic	Chronic Effects local	Chronic Effects systemic
Methanol CAS-No 67-56-1	Oral	na	8mg/kg bw/day	na	8mg/kg bw/day
	Inhalation	na			
	Dermal	na	8mg/kg bw/day	na	8mg/kg bw/day
Ethanol CAS-No 64-17-5	Oral	na			
	Inhalation	na	na	na	950 mg/m^3
	Dermal	na	na	na	343mg/kg bw/day**

** Repeated dose toxicity – NOAEL Oral Value: 8238 mg/kg bw/day

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

8.2.2 Personal protective equipment

8.2.2.1 Eye/face protection

Avoid exposure to sprays/mist/aerosols. Use face shield and/or safety goggles for eye protection complying with appropriate government standards such as EN166 (EU).

8.2.2.2 Skin and Body Protection

Handle with chemical-resistant, impervious gloves or complying with appropriate government standards: EU Directive 89/686/EEC; standard EN 374. Inspect gloves prior to use to ensure adequate protection. Use proper glove removal technique to avoid skin contact with substance/ mixture. Dispose of contaminated gloves after use in accordance with local and national applicable laws and good laboratory practises. Wash and dry hands thoroughly after handling. Promptly remove any contaminated clothing and clean appropriately before reuse. Use chemically protective clothing with closed cuffs and closed neck, appropriate to the concentration /amount of the dangerous substance at the specific workplace.

8.2.2.3 Respiratory protection

Inhalation of oil mist or vapours may cause respiratory irritation. It is recommended that full-face respirator or air hood be used where local exhaust ventilation is inadequate; use respirator and components tested and approved to appropriate government standards such as NIOSH (US) or EN 143 / EN 14387 (EU).

8.2.2.4 Thermal Hazards

No specific thermal hazard. Product is stored at room temperature.

8.2.3 Environmental Exposure Controls None.

SECTION 9. Physical and Chemical Properties

The physical/chemical properties of this product has not been fully investigated. Judgements have been made based upon consideration of its major component(s).

9.1 Information on basic physical and chemical properties

a)	Physical state:	Liquid.
b)	Colour:	Dark Red
c)	Odour:	Alcoholic
d)	Melting/freezing point	No data available
e)	Initial boiling point /boiling range:	No data available
f)	Flammability:	No data available
g)	Upper/lower explosion limits:	Not applicable
h)	Flash point:	Apprx. 19°C (untested)
i)	Auto-ignition temperature:	Not applicable
j)	Decomposition temperature:	No data available
k)	pH:	Aprx. 10.2
l)	Kinematic viscosity:	Not applicable
m)	Solubility at 20°C: Water	Miscible
	Fat	No data available
n)	Partition coefficient n-octanol/water (log value):	Not applicable
o)	Vapour pressure:	No data available
p)	Density and/or relative density:	No data available
q)	Relative vapour density:	Not applicable
r)	Particle characteristics:	Not applicable

9.2 Other information

9.2.1. Information with regard to physical hazard classes Not applicable.

9.2.2. Other safety characteristics Not applicable.

SECTION 10. Stability and Reactivity

This product has not been tested. Judgements on the expected stability/reactivity of this product have been made based upon consideration of its major components.

10.1	**Reactivity**	No data available
10.2	**Chemical stability**	Stable under specified conditions of use and storage
10.3	**Possibility of hazardous reactions**	No data available
10.4	**Conditions to avoid**	Heat, naked flames, other sources of ignition. Extremes of temperature and direct sunlight.
10.5	**Incompatible materials**	Strong Oxidising agents.
10.6	**Hazardous decomposition products**	Products of Carbon Oxides and Nitrogen Oxides may be produced on burning or heating. The nature of released decomposition products has not been determined.

SECTION 11. Toxicological Information

11.1 Information on toxicological effects

This product has not been tested. Judgements on the expected toxicity of this product have been made based upon consideration of its major components.

Toxicokinetics - Mixture

(a) Acute toxicity — Based on available data; the classification criteria are met.
HS200 - Harmful if inhaled.
Methanol CAS-No 67-56-1
Oral, human: LDLo=300mg/kg
Inh, monkey: LCLo=1000ppm
Derm, monkey: LDLo= 393mg/kg

(b) Skin corrosion/irritation — Based on available data; the classification criteria are not met.

(c) Serious eye damage/ eye irritation — Based on available data; the classification criteria are not met.

(d) Respiratory or skin sensitization — Based on available data; the classification criteria are not met.

(e) Germ cell mutagenicity — Based on available data; the classification criteria are not met.

(f) Carcinogenicity — Based on available data, the classification criteria are met.
HS200 - may cause cancer.
Tumourigenic **RTECS criteria**: Congo Red - QK1400000 (CAS-No 573-58-0)
EU: This product contains a component present at levels greater than or equal to 0.1% which is identified as possible human carcinogen by EU.
Congo Red – 1B May cause cancer.

(g) Reproductive toxicity — Based on available data; the classification criteria are not met.
Congo Red – suspected of damaging the unborn child.

(h) STOT Specific target organ toxicity
- single exposure — Based on available data; the classification criteria are met.
HS200 - May cause damage to the optic nerve & central nervous system by the oral route.

(i) STOT Specific target organ toxicity
- repeated exposure — Based on available data; the classification criteria are not met.

(j) Aspiration hazard — Based on available data; the classification criteria are not met.

Potential health effects

Inhalation	Harmful if inhaled. May cause respiratory tract irritation.
Ingestion	May be harmful if swallowed. Contains components which may cause vomiting or other adverse effects such as diarrhoea.
Skin	May be harmful in prolonged contact with skin. Readily adsorbed. May cause skin irritation and/or allergic skin reaction.
Eyes	May be harmful if in contact with eyes. May cause eye irritation.

Signs and Symptoms of Exposure Short term exposure may result in drowsiness, headache, confusion, sickness, abdominal pain, possibly within 30 minutes of exposure.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties: No component of this mixture is classified as endocrine disrupting according to Regulation (EU) No 2017/2100.

11.2.2 Other information: No data available.

SECTION 12. Ecological Information

This product has not been tested. Judgements on the expected toxicity of this product have been made based upon consideration of its major components.

12.1 Aquatic Toxicity Not classified as acutely toxic to aquatic organisms. Adverse ecological effects cannot be excluded in the event of improper handling or disposal.

Toxicity to fish No data available.

12.2 Persistence and degradability No data available.

12.3 Bioaccumulative potential No data available. Do not let undiluted product or large quantities enter drains or water course. Inform responsible authorities as appropriate.

12.4 Mobility in soil No data available

12.5 Results of PBT and vPvB assessment This mixture does not contain any substances that are assessed to be a PBT or a vPvBs.

12.6 Endocrine disrupting properties No component of this mixture is classified as endocrine disrupting according to Regulation (EU) No 2017/2100.

12.7 Other adverse effects No data available.

SECTION 13. Disposal Considerations

13.1 Waste treatment methods

13.1.1 Product Offer surplus. Dispose of non-recyclable substances via a licensed waste material processor in accordance with local authority requirements.

Contaminated Packaging Dispose of as unused product.

SECTION 14. Transport Information

		ADR/RID	IMDG	IATA
14.1	**UN-Number**	1170	1170	1170
14.2	**UN proper shipping name**	Ethanol Solution		
14.3	**Transport hazard class(es)**	3	3	3
14.4	**Packaging group**	II	II	II
14.5	**Environmental hazards**	No	Marine pollutant: No	No
14.6	**Special precautions for users**	No data available		
14.7	**Maritime transport in bulk according to IMO instruments**	No data available		

SECTION 15. Regulatory information

This Safety Data Sheet complies with the requirements of Regulations (EC) No. 1907/2006 and its amendments (EU) No. 453/2010 & (EU) No. 2015/830; and (EC) No. 1272/2008.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
All components are listed as existing substances in Europe

15.2 Chemical Safety Assessment
A Chemical Safety Assessment has not been carried out for this product.

SECTION 16. Other information

Additional information from Section 3.

Hazard Statement(s)

H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed. .
H311	Toxic in contact with skin.
H331	Toxic if inhaled.
H350	May cause cancer.
H361d	May damage the unborn child.
H370	Causes damage to organs.

Further information
The information herein is provided in good faith and is correct to the best of our knowledge but makes no representation as to its completeness or accuracy. This safety data sheet is intended for use only as a guide for the appropriate precautionary handling of material by suitably trained persons.
TCS Biosciences Ltd shall not be held liable for any loss, injury or damage which may result from its use.

v1: created 15.05.13
v 2; created 12.11.13 amended to include CLP classification
v3; Created 31.07.2014 updated
v4 created 2.10.2015, removal of Regulations for 1999/45//EEC & 67/548/EEC Sections 2 and 3; amendments to section 11.
v5 created 01.04.2017, addition of StainHD logo.
Version 6 created 13.04.2022, addition of EC Representative information to Section 1, format updated to comply with Annex II of REACH.

HS200 end