

Version 6.4.

Revision Date 25/09/18

As amended and in accordance with REACH Regulation (EC) No. 1907/2006 and CLP Regulation (EC) No. 1272/2008

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

1.1 Product identifiers

Product name : Gold Star
Product number : GS1
Brand : Meridian Biotechnologies Ltd
REACH NO. : Where relevant, REACH registration number(s) for component substances are listed in Section 3 of this SDS.

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

Sector of Use : Industrial For Research & Development use ONLY.
Application of the substance / the mixture : Liquid Scintillation Cocktail

1.3 Details of the supplier of the safety data sheet

Company : Meridian Biotechnologies Ltd, Unit 6,
Epsom Downs Metro Centre,
Waterfield, Tadworth, Surrey KT20 5LR
United Kingdom
Telephone : +44 (0) 20 8397 8316 (Monday – Friday 9am-5pm)
Fax : +44 (0) 20 8391 1373
E-mail address : info@meridian-biotech.com
Further information obtainable from : Product Safety Department

1.4 Emergency telephone numbers:

During normal opening times: +44 (0) 20 8397 8316 (Monday – Friday 9am-5pm)
After hours: +44 (0) 7971000273

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute Oral Toxicity	Category 4	H302
Aspiration Toxicity	Category 1	H304
Skin Irritation	Category 2	H315
Eye Damage	Category 1	H318
Chronic Aquatic	Category 1	H410

For the full text of the H-Statements mentioned here - see section 16

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard
pictograms



GHS07



GHS05



GHS08



GHS09

Signal word

Danger

Hazard statements

H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H318	Causes serious eye damage
H410	Very toxic to aquatic life with long lasting effects

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Precautionary statements

P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P310 + P331	IF SWALLOWED: Immediately call a POISON CENTRE / DOCTOR. DO NOT INDUCE VOMITING
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.

2.3 Other hazards

None known

SECTION 3: Composition / Information on Ingredients

3.2 Chemical characterisation: Mixtures

Description: Mixture of substances listed below with non-hazardous additions.

Hazardous components:

Bis (isopropyl) naphthalene (DIPN, mixture of isomers)			
CAS #: 38640-62-9 EC NUMBER: 254-052-6 REACH: 01-2119565150-48-0000	Aspiration Toxicity category 1 Chronic aquatic 1	H304 H410	50-80%
4-Nonyl phenol, branched and linear ethoxylated (NPE) are included in the Regulation (EC) No.1907/2006 (REACH): <ul style="list-style-type: none"> • Candidate List of Substances of Very High Concern (SVHC) - Listed • Annex XIV - List of substances subject to authorisation - Listed (Sunset date 04/01/2021) • Annex XVII – Restriction on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles – Listed • 			
CAS #: 127087-87-0 EINECS: 500-315-8 REACH: Exempt	Acute oral toxicity category 4 Skin irritation category 2 Eye damage category 1 Chronic aquatic category 2	H302 H315 H318 H411	20-40%
Phosphate Ester			
CAS #: 39464-70-5 EC NUMBER: 609-691-9 REACH: N/A	Eye irritation category 1 Skin irritation category 2	H318 H315	5-10%
2-(2-butoxyethoxy)ethanol			
CAS #: 112-34-5 EC NUMBER: 203-961-6 REACH: 01-2119475104-44-XXXX	Eye irritation category 2	H319	10-20%

For the full text of the H-Statements mentioned here - see section 16

For further information on Regulations – see section 15

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SECTION 4: First Aid Measures

4.1 Description of first aid measures

General information:	Consult a doctor. Show this safety data sheet to the doctor in attendance.
If inhaled:	Move person into fresh air.
In case of contact with skin contact:	Wash off with plenty of water.
In case of eye contact:	Rinse thoroughly with plenty of water for at least 15 minutes and consult a doctor. Protect unharmed eye.
If swallowed:	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Call for a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing agents:	Carbon Dioxide, dry powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
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5.2 Special hazards arising from the substance or mixture

No further relevant information available.

5.3 Advice for fire-fighters

Special Protective equipment:	Wear self-contained respiratory protective device. Wear fully protective suit.
Further Information:	Cool closed containers exposed to fire with water spray. Contaminated water must not be discharged into drains.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions:	Use personal protective equipment. Keep unprotected persons away.
Special precautions:	Particular danger of slipping on leaked/spilled product.

6.2 Environmental precautions

Environmental precautions:	Inform respective authorities in case of seepage into water course. Do not allow to enter surface or ground water. Dilute with plenty of water.
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6.3 Methods and material for containment and cleaning up

Methods for cleaning up:	Absorb with liquid binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation. Pick up mechanically. Dispose in according to local regulations (see section 13).
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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.

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SECTION 7: Handling and Storage

7.1 Precautions for safe handling

Advice on safe handling:

Wear personal protective equipment.
 Avoid contact with skin and eyes.
 Ensure good ventilation/exhaustion at the workplace.
 Prevent formation of aerosols.

Information about fire and explosion protection:

Keep away from sources of ignition.
 Do not smoke.

7.2 Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles:

No special requirements.

Information about storage in one common storage facility:

Not required.

Further information about storage conditions:

Keep container tightly sealed.
 Protect from exposure to the light.

7.3 Specific end use(s)

Specific use (s):

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection equipment.

SECTION 8: Exposure Controls / Personal Protection

8.1 Control parameters

Components with workplace control parameters:

Component	CAS - No	Exposure	Value	Control Parameter
Di-isopropylnaphthalene isomers	38640-62-9	DNEL	long term	2.1 mg/kg/d ORAL 2.1 mg/kg/d DERMAL 7.4 mg/kg/d INHALATION
2-(2-butoxyethoxy) ethanol	112-34-5	WEL	STEL TWA	101.2 mg/m ³ , 15 ppm 67.5 mg/m ³ , 10ppm

8.2 Exposure controls

General protective and hygienic measures:

Handle in accordance with good industrial hygiene and safety practice.
 Immediately remove all soiled and contaminated clothing.
 Wash hands before breaks and at the end of work.
 Avoid contact with the eyes and skin.
 Do not eat, drink, smoke or sniff while working.
 Wear suitable gloves, body and eye protection and a face shield.

Personal Protective Equipment:
Respiratory protection:
Skin protection:

No personal respiratory protective equipment normally required.
 Handle with protective gloves. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

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Splash contact

Material: Nitrile-rubber

Minimum layer thickness: 0.4 mm

Break through time: 30 min

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Eye / face protection:

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH(Us) or EN 166(EU).

Body protection:

Protective work clothing – complete suit protecting against chemicals. The type of protective clothing must be selected according to the concentration and amount of the dangerous substance at the specified workplace.

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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

Physical state:	Liquid
Form:	Liquid
Colour:	According to specification
Odour:	Characteristic
Odour threshold:	Not determined
pH-value:	~6
Melting point/Melting range:	Not determined
Boiling point/Boiling range:	290°C
Flash point:	148°C
Flammability (solid, gaseous):	Not applicable
Ignition temperature:	383°C
Decomposition temperature:	Not determined
Self-igniting:	Product is not self igniting
Danger of explosion:	Product does not present explosion hazard.
Explosion limits:	
Lower:	Not determined
Upper:	Not determined
Vapour pressure:	1.5 hPa
Density at 20 °C:	0.96gm/cm ³
Relative density	Not determined
Vapour density	Not determined
Evaporation rate	Not determined
Solubility in / Miscibility with water:	Partially miscible
Particle size	Not applicable
Partition coefficient (n-octanol/water):	Not determined
Viscosity:	
Dynamic:	Not determined
Kinematic:	Not determined

9.2 Other information

No further relevant information available.

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SECTION 10: Stability and Reactivity

10.1 Reactivity:	No data available.
10.2 Chemical stability	Stable under recommended storage conditions. No decomposition if used according to specifications.
10.3 Possibility of hazardous reactions:	Reacts with strong oxidising agents.
10.4 Conditions to avoid	Toxic fumes may be released if heated above decomposition point.
10.5 Incompatible materials:	No further relevant information available.
10.6 Hazardous decomposition products:	Carbon monoxide, carbon dioxide, nitrogen oxides and phosphorus compounds.

SECTION 11: Toxicological Information

11.1 Information on toxicological effects

Component	CAS - No	LD50 / 48 hours
Di-isopropylnaphthalene isomers	38640-62-9	>4,000 mg/kg (rat) ORAL >4,000 mg/kg (rat) DERMAL >5.6 mg/l (rat) INHALATION
4-Nonyl phenol, branched ethoxylated	127087-87-0	>2,000 mg/kg (rat) ORAL >2,000 mg/kg (rabbit) DERMAL >21.9 mg/l (rat) INHALATION
2-(2-butoxyethoxy) ethanol	112-34-5	>7,291 mg/kg (rat) ORAL >2,764 mg/kg (rat) DERMAL

Skin corrosion / irritation:	Causes skin irritation.
Serious eye damage / eye irritation:	Causes serious eye damage.
Respiratory sensitisation:	May cause respiratory irritation.
Germ cell mutagenicity:	No data available.
Carcinogenicity:	No data available.
Reproductive toxicity:	No data available.
Specific Target Organ Toxicity – Single Exposure:	No data available.
Specific Target Organ Toxicity – Repeated Exposure:	No data available.
Aspiration hazard:	Maybe fatal if swallowed and enters airways.
Additional information:	The toxicological properties of the mixture have not been fully investigated.

SECTION 12: Ecological Information

12.1 Toxicity

Aquatic toxicity:

Component	CAS - No	LL50 / 48 hours
Di-isopropylnaphthalene isomers	38640-62-9	Daphnia 1.7 mg/l
4-Nonyl phenol, branched ethoxylated	127087-87-0	Brachydanio rerio: > 1-10 mg/l
2-(2-butoxyethoxy) ethanol	112-34-5	Daphnia 1.3 mg/l

12.2 Persistence and degradability:	No further relevant information available.
12.3 Bio accumulative potential:	No further relevant information available.
12.4 Mobility in soil:	No further relevant information available.
12.5 Results of PBT and vPvB Assessment:	PBT: Not assessed vPvB: Not assessed
12.6 Other adverse effects	
Additional ecological information:	Toxic to aquatic life with long lasting effects.
General notes:	Do not allow undiluted or un-neutralised product or large quantities of product to reach ground water, water course or sewage system. Dangerous to drinking water even if small quantities leak into the ground. Poisonous to fish or plankton.

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SECTION 13: Disposal Considerations

13.1 Waste treatment methods

Product: Waste product must be disposed of as hazardous waste.

Uncleaned Packaging: Disposal must be made according to official regulations.
 Uncleaned packaging may be classifiable as hazardous waste.

SECTION 14: Transport Information

14.1 UN-Number ADR, IMDG, IATA

UN3082

14.2 UN proper shipping name ADR

 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID, N.O.S.
 (contains Di-isopropylnaphthalene isomers, 4-Nonyl phenol, branched ethoxylated)

IMDG/IATA

 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID,
 N.O.S. (contains Di-isopropylnaphthalene isomers, 4-Nonyl phenol,
 branched ethoxylated) MARINE POLLUTANT

14.3 Transport hazard class(es) ADR, IMDG, IATA

9 Miscellaneous dangerous goods

14.4 Packing group - ADR, IMDG, IATA

III

14.5 Environmental hazards:

 This product contains environmentally hazardous substances:
 Di-isopropylnaphthalene isomers, 4-Nonyl phenol, branched ethoxylated)

Marine pollutant
 Special marking (ADR)

Symbol (fish and tree)
 Symbol (fish and tree)

14.6 Special precautions for user Danger code (Kemler): EMS Number:

WARNING: Miscellaneous dangerous goods
 90
 F-A,S-F

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Limited quantities (LQ) 5L
 Excepted quantities (EQ) Code: E1
 Maximum net quantity per inner packaging: 30g
 Maximum net quantity per outer packaging: 1000g
 Transport category 3
 Tunnel restriction code E
 IMDG
 Limited quantities (LQ) 5L

Excepted quantities (EQ) Code:

E1
 Maximum net quantity per inner packaging: 30 g
 Maximum net quantity per outer packaging: 1000g

UN "Model Regulation":

 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID, N.O.S.
 (contains Di-isopropylnaphthalene isomers, 4-Nonyl phenol, branched ethoxylated), 9, III

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SECTION 15: Regulatory Information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU Regulations****REACH Regulation (EC) No. 1907/2006**

- **Candidate List of Substances of Very High Concern (SVHC):** Listed
- **Authorisation List, Annex XIV:** Listed (Sunset date: 04/01/2021)
- **Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles, Annex XVII:** Listed; 46 b) Nonylphenol Ethoxylates

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.**SECTION 16: Other Information****Hazard statements**

H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation.
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P310 + P331	IF SWALLOWED: Immediately call a POISON CENTRE / DOCTOR. DO NOT INDUCE VOMITING
P303+P361+P353	IF ON SKIN (or hair): Remove/Takeoff immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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)

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals