



# Safety Data Sheet – Hybridisation Solution

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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

1.1	Product identifier				
	Product form:	Mixture			
	Name:	Hybridisation Solution			
	Product code:	HB **** / HI ****			
1.2	Relevant identified uses of the substance or mixture and uses advised against				
1.2.1	Relevant identified uses				
	Main use category:	Professional use			
	Use of substance/mixture:	Laboratory chemicals			
1.2.2	Uses advised against				
	No additional information available				
1.3	Details of the supplier of the safety data sheet				
	Cytocell Ltd, Oxford Gene Technology 418 Cambridge Science Park, Milton Road, Cambridge, CB4 0PZ. United Kingdom T: +44 (0) 1223 294048 F: +44 (0) 1223 294986 probes@cytocell.com <a href="http://www.ogt.com">http://www.ogt.com</a>				
1.4	Emergency telephone number				
	Country	Organisation/Company	Address	Emergency Number	Comment
	Ireland	National Poisons Information Centre, Beaumont Hospital	Beaumont Hospital Beaumont Road, 9 Dublin	+353 1 8379964	
	United Kingdom	National Poisons Information Service (NHS Direct)	<a href="http://www.npis.org">www.npis.org</a>	111 (England & Wales only) 112 (EU) 08454 24 24 24 (Scotland)	

## SECTION 2: Hazards identification

2.1	Classification of the substance or mixture	
2.1.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
	Skin corrosion/irritation, Category 2	H315
	Serious eye damage/eye irritation, Category 2	H319
	Reproductive toxicity, Category 1B	H360
	Full text of hazard classes and H-statements: see section 16	
2.1.2	Adverse physicochemical, human health and environmental effects	
	May damage fertility or the unborn child. Causes skin irritation. Causes serious eye irritation.	
2.2	Label elements	
	Labelling according to Regulation (EC) No. 1272/2008 [CLP]	
	Hazard pictograms (CLP):	<div> GHS07</div> <div> GHS08</div>
	Signal word (CLP):	Danger
	Hazardous ingredients:	formamide
	Hazard statements (CLP):	H315 - Causes skin irritation H319 - Causes serious eye irritation H360 - May damage fertility or the unborn child

	Precautionary statements (CLP):	P202 - Do not handle until all safety precautions have been read and understood P280 - Wear eye protection, protective clothing, protective gloves P302+P352 - IF ON SKIN: Wash with plenty of soap and water P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P308+P313 - IF exposed or concerned: Get medical advice/attention P362+P364 - Take off contaminated clothing and wash it before reuse P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation
<b>2.3</b>	<b>Other hazards</b>	
	No additional information available	

### SECTION 3: Composition/information on ingredients

3.1	Substance			
	Not applicable			
3.2	Mixture			
	Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
	Formamide Substance listed as REACH Candidate	(CAS No) 75-12-7 (EC no) 200-842-0 (EC index no) 616-052-00-8	>= 50	Repr. 1B, H360D
	Dextran sulfate, sodium salt	(CAS No) 9011-18-1	< 15	Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315
	Sodium chloride Substance with national workplace exposure limit(s) (LT, LV)	(CAS No) 7647-14-5 (EC no) 231-598-3 (REACH-no) 01-2119485491-33-XXXX	< 15	Not classified
	Full text of H-statements: see section 16			

### SECTION 4: First aid measures

<b>4.1</b>	<b>Description of first aid measures</b>	
	First-aid measures general: First-aid measures after inhalation: First-aid measures after skin contact: First-aid measures after eye contact: First-aid measures after ingestion:	IF exposed or concerned: Get medical advice/attention. Remove person to fresh air and keep comfortable for breathing. Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention. 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. Call a poison center or a doctor if you feel unwell.
<b>4.2</b>	<b>Most important symptoms and effects, both acute and delayed</b>	
	Symptoms/injuries after skin contact: Symptoms/injuries after eye contact:	Irritation. Eye irritation.
<b>4.3</b>	<b>Indication of any immediate medical attention and special treatment needed</b>	
	Treat symptomatically.	

### SECTION 5: Firefighting measures

<b>5.1</b>	<b>Extinguishing media</b>	
	Suitable extinguishing media:	Water spray. Dry powder. Foam. Carbon dioxide.
<b>5.2</b>	<b>Special hazards arising from the substance or mixture</b>	
	Hazardous decomposition products in case of fire:	Toxic fumes may be released.
<b>5.3</b>	<b>Advice for firefighters</b>	
	Protection during firefighting:	Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

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

#### 6.1.1 For non-emergency personnel

Emergency procedures: Only qualified personnel equipped with suitable protective equipment may intervene.

#### 6.1.2 For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2 Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

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

Methods for cleaning up: Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.  
Other information: Dispose of materials or solid residues at an authorized site.

### 6.4 Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Precautions for safe handling: Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with skin and eyes.

Hygiene measures: Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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

Storage conditions: Store locked up. Store in a well-ventilated place. Keep cool.

### 7.3 Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

formamide (75-12-7)

Belgium	Limit value (mg/m <sup>3</sup> )	18 mg/m <sup>3</sup> (Formamide; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	10 ppm (Formamide; Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m <sup>3</sup> )	30 mg/m <sup>3</sup> (Formamide; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
France	VME (ppm)	20 ppm (Formamide; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	37 mg/m <sup>3</sup> Formamide; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	20 ppm Formamide; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	56 mg/m <sup>3</sup> Formamide; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	30 ppm Formamide; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
USA - ACGIH	ACGIH TWA (ppm)	10 ppm (Formamide; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)

<b>9.1</b>	<b>Information on basic physical and chemical properties</b>																																																
	<table border="0"> <tr> <td>Physical state:</td><td>Liquid</td></tr> <tr> <td>Appearance:</td><td>Liquid</td></tr> <tr> <td>Colour:</td><td>No data available</td></tr> <tr> <td>Odour:</td><td>Odourless</td></tr> <tr> <td>Odour threshold:</td><td>No data available</td></tr> <tr> <td>pH:</td><td>No data available</td></tr> <tr> <td>Relative evaporation rate (butylacetate=1):</td><td>No data available</td></tr> <tr> <td>Melting point:</td><td>Not applicable</td></tr> <tr> <td>Freezing point:</td><td>No data available</td></tr> <tr> <td>Boiling point:</td><td>No data available</td></tr> <tr> <td>Flash point:</td><td>154°C</td></tr> <tr> <td>Auto-ignition temperature:</td><td>No data available</td></tr> <tr> <td>Decomposition temperature:</td><td>No data available</td></tr> <tr> <td>Flammability (solid, gas):</td><td>Not applicable</td></tr> <tr> <td>Vapour pressure:</td><td>No data available</td></tr> <tr> <td>Relative vapour density at 20°C:</td><td>No data available</td></tr> <tr> <td>Relative density:</td><td>No data available</td></tr> <tr> <td>Solubility:</td><td>No data available</td></tr> <tr> <td>Log Pow:</td><td>No data available</td></tr> <tr> <td>Viscosity, kinematic:</td><td>No data available</td></tr> <tr> <td>Viscosity, dynamic:</td><td>No data available</td></tr> <tr> <td>Explosive properties:</td><td>No data available</td></tr> <tr> <td>Oxidising properties:</td><td>No data available</td></tr> <tr> <td>Explosive limits:</td><td>No data available</td></tr> </table>	Physical state:	Liquid	Appearance:	Liquid	Colour:	No data available	Odour:	Odourless	Odour threshold:	No data available	pH:	No data available	Relative evaporation rate (butylacetate=1):	No data available	Melting point:	Not applicable	Freezing point:	No data available	Boiling point:	No data available	Flash point:	154°C	Auto-ignition temperature:	No data available	Decomposition temperature:	No data available	Flammability (solid, gas):	Not applicable	Vapour pressure:	No data available	Relative vapour density at 20°C:	No data available	Relative density:	No data available	Solubility:	No data available	Log Pow:	No data available	Viscosity, kinematic:	No data available	Viscosity, dynamic:	No data available	Explosive properties:	No data available	Oxidising properties:	No data available	Explosive limits:	No data available
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<b>9.2</b>	<b>Other information</b>																																																
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<b>10.1</b>	<b>Reactivity</b>
	The product is non-reactive under normal conditions of use, storage and transport.
<b>10.2</b>	<b>Chemical stability</b>
	Stable under normal conditions.
<b>10.3</b>	<b>Possibility of hazardous reactions</b>
	No dangerous reactions known under normal conditions of use..
<b>10.4</b>	<b>Conditions to avoid</b>
	None under recommended storage and handling conditions (see section 7).
<b>10.5</b>	<b>Incompatible materials</b>
	No additional information available
<b>10.6</b>	<b>Hazardous decomposition products</b>
	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

11.1	Information on toxicological effects	
	Acute toxicity:	Not classified
	formamide (75-12-7)	
	LD50 oral rat	> 5000 mg/kg (Rat)
	LD50 dermal rat	> 5000 mg/kg (Rat)
	LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
	dextran sulfate, sodium salt (9011-18-1)	
	LD50 oral rat	20600 mg/kg (Rat)
	sodium chloride (7647-14-5)	
	LD50 oral rat	3000 mg/kg (Rat; Experimental value; 3550 mg/kg bodyweight; Rat; Experimental value)
	LD50 dermal rabbit	> 10000 mg/kg (Rabbit; Experimental value)
	Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitisation: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: Specific target organ toxicity (single exposure): Specific target organ toxicity (repeated exposure): Aspiration hazard:	Causes skin irritation. Causes serious eye irritation. Not classified Not classified Not classified May damage fertility or the unborn child. Not classified Not classified Not classified

## SECTION 12: Ecological information

12.1	Toxicity	
	Ecology - general:	The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
	formamide (75-12-7)	
	LC50 fish 1	4600 mg/l (LC50; 96 h; Leuciscus idus)
	EC50 Daphnia 1	> 500 mg/l (EC50; 48 h)
	Threshold limit algae 1	> 500 mg/l (EC50; 72 h)
	sodium chloride (7647-14-5)	
	LC50 fish 2	5840 mg/l (LC50; ASTM; 96 h; Lepomis macrochirus; Flow-through system; Fresh water; Experimental value)
	Threshold limit algae 2	2430 mg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 120 h; Algae; Static system; Fresh water; Experimental value)
12.2	Persistence and degradability	
	formamide (75-12-7)	
	Persistence and degradability	Inherently biodegradable. Biodegradable in soil. Photodegradation in the air.
	BOD (% of ThOD)	0
	dextran sulfate, sodium salt (9011-18-1)	
	Persistence and degradability	Biodegradability in water: no data available.
	sodium chloride (7647-14-5)	
	Persistence and degradability	Biodegradability: Not applicable. No (test)data available on mobility of the substance.
	Biochemical oxygen demand (BOD)	Not applicable
	Chemical oxygen demand (COD)	Not applicable
	ThOD	Not applicable

<b>12.3</b>	<b>Bioaccumulative potential</b>	
	formamide (75-12-7)	
	Log Pow	-1,6 - -0,82
	Bioaccumulative potential	Bioaccumulation: Not applicable.
	dextran sulfate, sodium salt (9011-18-1)	
	Bioaccumulative potential	Bioaccumulation: No data available.
	sodium chloride (7647-14-5)	
	Log Pow	-3,0 (Calculated)
	Bioaccumulative potential	Low bioaccumulation potential (Log Kow < 4).
<b>12.4</b>	<b>Mobility in soil</b>	
	formamide (75-12-7)	
	Surface tension	0,058 N/m
<b>12.5</b>	<b>Results of PBT and vPvB assessment</b>	
	Component	
	formamide (75-12-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
<b>12.6</b>	<b>Other adverse effects</b>	
	No additional information available	

## SECTION 13: Disposal considerations

<b>13.1</b>	<b>Waste treatment methods</b>	
	Waste treatment methods: Waste disposal recommendations:	Dispose of contents/container in accordance with licensed collector's sorting instructions. Avoid release to the environment.

## SECTION 14: Transport information

	In accordance with ADR / RID / IMDG / IATA / ADN				
	ADR	IMDG	IATA	ADN	RID
<b>14.1</b>	<b>UN number</b>				
	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.2</b>	<b>UN proper shipping name</b>				
	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.3</b>	<b>Transport hazard class(es)</b>				
	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.4</b>	<b>Packing group</b>				
	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5</b>	<b>Environmental hazards</b>				
	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
	No supplementary information available				
<b>14.6</b>	<b>Special precautions for user</b>				
	Overland transport				
	Not applicable				
	Transport by sea				

	Not applicable
	Air transport
	Not applicable
	Inland waterway transport
	Not applicable
	Rail transport
	Not applicable
<b>14.7</b>	<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>
	Not applicable

## SECTION 15: Regulatory information

<b>15.1</b>	<b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b>	
<b>15.1.1</b>	<b>EU-Regulations</b>	
	The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:	
	3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008	Hybridisation Solution - formamide
	3.b. Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10	Hybridisation Solution - Hybridisation Solution
	30. Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as Toxic to Reproduction category 1A or 1B (Table 3.1) or Toxic to Reproduction category 1 or 2 (Table 3.2) and listed as follows: Reproductive toxicant category 1A adverse effects on sexual function and fertility or on development (Table 3.1) or Reproductive toxicant category 1 with R60 (May impair fertility) or R61 (May cause harm to the unborn child) (Table 3.2) listed in Appendix 5 Reproductive toxicant category 1B adverse effects on sexual function and fertility or on development (Table 3.1) or Reproductive toxicant category 2 with R60 (May impair fertility) or R61 (May cause harm to the unborn child) (Table 3.2) listed in Appendix 6	formamide - formamide
	Contains a substance on the REACH candidate list in concentration $\geq 0.1\%$ or with a lower specific limit: Formamide (EC 200-842-0, CAS 75-12-7)	
	Contains no REACH Annex XIV substances	
<b>15.1.2</b>	<b>National regulations</b>	
	<b>Germany</b>	
	VwVwS Annex reference:	Water hazard class (WGK) 1, low hazard to waters (Classification according to VwVwS, Annex 4)
	12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV:	Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)
	<b>Netherlands</b>	
	SZW-lijst van kankerverwekkende stoffen: SZW-lijst van mutagene stoffen: NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding: NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid: NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling:	None of the components are listed None of the components are listed None of the components are listed None of the components are listed None of the components are listed

	Denmark	
	Recommendations Danish Regulation:	<p>Young people below the age of 18 years are not allowed to use the product</p> <p>Pregnant/breastfeeding women working with the product must not be in direct contact with the product</p> <p>The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal</p>
<b>15.2</b>	<b>Chemical safety assessment</b>	
	No chemical safety assessment has been carried out	

## SECTION 16: Other information

Full text of H- and EUH-statements:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 1B	Reproductive toxicity, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H360	May damage fertility or the unborn child
H360D	May damage the unborn child

SDS EU\_NSC

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*