# Material Safety Data Sheet



Revision Date

20.05.2020

1. IDENTIFICATION OF	THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERT	AKING
Product name	Pst I	
Product code	FG-Pstl	
Recommended use of the chemical and restric	tions on use	
Recommended use	For research use only	
Restrictions on use	For research use only	
Details of the supplier		
Company name	Nippon Genetics Europe	
Address	Mariaweilerstraße 28-30, 52349 Dueren, Germany	
Emergence contact number	(+49)2421554960	
	2. HAZARDS IDENTIFICATION	
Classification of Hazards and dangerousness	No relevant classification	
Warning article including prevention methods		
Pictorial symbol	No information available	
Category	No information available	
Hazards and dangerousness	No information available	
Prevention methods		
Prevention	No information available	
Action	No information available	
Store	No information available	
Discard	No information available	
Other hazards and dangerousness (NFPA) not	included in classification	
Health	1	
Fire	1	

3. COMPOSITION/INFORMATION ON INGREDIENTS			
Material name	Usual name	CAS No.	Amount (%)
Glycerin	Usual name GLYCEROL	CAS No. 56-81-5	Amount (%) 40 ~ 60

	4. FIRST AID MEASURES
Eye contact	Take medical action immediately.
	Immediately rinse skin and eyes thoroughly with plenty of running water for at least 20 minutes.
Skin contact	Take medical action immediately.
	Immediately rinse skin and eyes thoroughly with plenty of running water for at leas
	20 minutes.
	Remove contaminated clothes and shoes and isolate contaminated area
	Completely wash clothes and shoes before reuse
Inhalation	Remove to fresh air
	CPR when there is no breathing
	Provide Oxygen when breathing is difficult
	Take medical action immediately.
Ingestion	Do not provide any food for unconscious person
Note to physicians	Take protective action according to the material
	Do not inject adrenalin
Proper (improper) fire extinguishing agents	Small fire: dry sand, dry chemical, alcohol-resistant foam, water spray, regular foar CO <sub>2</sub> (suitable extinguishing agent)
	Large fires: water spray / mist, regular foam (suitable extinguishing agent)
<b>.</b>	High pressure water (improper extinguishing agent)
Specific hazards from chemical compounds	Can be ignited by heat, spark, flame
	Container may explode on heating
	Some can ride, but not easily ignite
	May cause irritation and poisonous gas in case of fire
	Inhalation of the substance may be harmful
	Some fluids may cause dizziness, suffocation-inducing vapors
Protective equipment and precautions for fire fighting	
Glycerin	No information available
6 ACC	IDENTAL RELEASE MEASURES
Personal precautions, protective	Micro particles can ignite fire or explosion therefore remove all the sources of fire.
equipment and emergency procedures	
	Stop leak if it is not dangerous
	Give attention to materials and conditions that should be avoid
	Do not enter the space without proper respirator or respirator until proper air (oxyg concentration 18 ~ 23.5%) is available.
Environmental precautions	Prevent entry into waterways, sewers, basements, and confined spaces.
Containment and cleaning up	In case of small leakage, flush contaminated area with large amount of water
Jan San San San San San San San San San S	In case of small leakage, absorb with sand and non-combustible material and plac
	in container.
	In case of large leakage, make a ditch away from liquid spills
	Put spills into a clean, dry container with clean shovel, loosely closed, then transf container from leak area
	In case of powder leakage, cover with plastic sheet to prevent spread and keep dr

7. HANDLING AND STORAGE	
Precautions for safe handling	Note the substances and conditions to avoid
	Wash thoroughly after handling
	Note the high temperature
In case of material leakage, reduce the oxygen concentration in the air and ca suffocation in an enclosed space, so be careful not to spill	
	Check the oxygen concentration before entering the place because there is a risk of loss of consciousness or death due to oxygen deficiency at high concentration in the air
	Keep this temperature below 20°C because this material evaporates slowly and reaches hazardous concentrations.
	Do not spray because it will evaporate faster if sprayed
Conditions for safe storage	Keep it tightly closed
	Store in a cool, dry place
8. EXPOSURE CONTROLS/PERSONAL PROTECTION	

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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mg/m <sup>3</sup>
tion applicable
atory protection equipment certified by Korea occupational safety and nov in a release of gas/liquid according to their chemical physical
filter or half-circled respiratory protection cartridge equipment if the on of release material is lower than 100mg/m <sup>3</sup>
filter or loose-fitting respiratory protection cartridge equipment such as et shape motor operated equipment or continuous flow protection mask if tration of release material is lower than 250mg/m <sup>3</sup>
filter or full face cartridge or motor operated half-circled equipment or continuous flow air supply respiratory protection equipment if the on of release material is lower than 500mg/m <sup>3</sup>
filter or full faced respiratory protection cartridge equipment or et type, pressurized mask if the concentration of release material is lower 0mg/m <sup>3</sup>
filter or auto air supply (SCBA) equipment or pressurized auto air supply spiratory protection equipment if the concentration of release material is 100000mg/m <sup>3</sup>
cal protection glasses and safety glasses
vash and emergency shower near work area
ble chemical resistant gloves
ble chemical resistant clothing
i v

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
State	Liquid
Color	Dark color to yellow color
Odor	Dull
Odor threshold	No information available
pH	Neutral
Melting point/freezing point	<b>20</b> °C
Early boiling point and range	171 °C
Flashing point	160 °C ((c.c.))

Appr density         3.1 ((ar=1))           Specific gravity         1.2813 ((water=1))           n-octanol distribution coefficient         No information available           Self-giniton temperature         20 0 C           Uscosity         994 0 C (d 25 C)           Molecular weight         920 C           Viscosity         994 0 C (d 25 C)           Molecular weight         920 C           Chemical stability and possibility of hazardous reactions         (dycarin           Glycarin         No information available           Materials available         Can available           Glycarin         No information available           Materials available         Can available           Glycarin         No information available           Can available         Can available           Glycarin         Can available           Can available         Can available           Glycarin         Loso 2 2200 mg/kg Rat (rail_DS01/2600mg/kg(UCLD))           Glycarin         Loso 2 2200 mg/kg Rat (		
Maximum / minimum svaporation or explosion range         19/27 %           Seare presure         0.005 refs (f S5 0.1)           Solubility         1000 gl at 25 T: solvent solubility atoold, eithy nontes, either insolubility. betreame, chinoroform, carbon itsuffice, oi ether, oi usuffice,	Evaporation rate	No information available
Seare pressure         0.0025 m/fg (st 50 °L)           Solubility         water soubility '100 0(1, at 25 °C advent solubility: stochol, ethyl noteshie, ether , insolubility: stochol, ethyl noteshie, ether , ethyl noteshie, ethyl noteshie, ether , ethyl noteshie, ether , ethyl noteshie, ethyl noteshie, ethyl noteshie, ethyl noteshie, ether , ethyl noteshie, ethyl note	Evaporation rate (solid/liquid)	Liquid
Solubility         water solubility. 1000 gl. at 25. 't solvent solubility. atcond, ethy a sonate, same interinterinteriobility. betweene, chinotoform, carbon tetrachloride, carbon usualdo, o ei ether, ol           Vapor density         3.1 ((a=1))           Specific gravity         1.2013 (water=1))           n-octanol (distribution coefficient         No information available           Soludity         930 0           Vascosity         954 0P (at 25 C).           Molecular weight         22.09           Chemical stability of hazardous resection         Giverin           Giverin         No information available           Molecular weight         No information available           Bitation to avoid         No information available           Giverin         No information available           Molecular weight         No information available           Giverin         No information available           Motorial arouce by degradation         No information available           Giverin         No information available           Motorial arouce by degradation         Instation, dificult to breathe, area, wonit, diambe, headache, diaziness, Silee diacoder, klöney problem, paralyzed           Giverin         No information available           Autor doison and extinguisher         Auto doison and extinguisher           Giverin         No	Maximum / minimum evaporation or explosion range	19 / 2.7 %
Vapor density         3.1 ((a)=1)           Specific gravy         3.61 ((a)=1)           social ((a)=1)         ((a)=1)           social ((a)=1)         ((a)=1)           social ((a) (a) (a) (a) (a) (a) (a) (a) (a) (a	Steam pressure	
Specif gavity         1.2613 ((water 1))           n-ctanal/distribution coefficient         370 C           Biassemble temperature         200 C           Viscosity         664 (cP (c1 25 C))           Molecular weight         82,09           Chemical tability and possibility of hazardous reactions         Kontantion available           Glycerin         No information available           Struction to avoid         Kontantion available           Chyrerin         No information available           Materials to avoid         Kontantion available           Chyrerin         No information available           Materials to avoid         Kontantion available           Chyrerin         No information available           Materials to avoid         Kontantion available           Chyrerin         No information available           Materials to avoid         Kontantion available           Chyrerin         No information available           Chyrerin         No information available           Chyrerin         Carl absorb (contantion available           Chyrerin         Carl absorb (contantion available           Chyrerin         Carl absorb (contantion available           Chyrerin         Carl absorb (contanton available           Chyrerin	Solubility	water solubility :1000 g/L at 25 $^\circ\!\!C$ solvent solubility: alcohol, ethyl acetate, ether insolubility, benzene, chloroform, carbon tetrachloride, carbon disulfide, oil ether, oil
noctand/distribution conflicient         No information available           Self-signition temperature         200 C           Viscosity         954 CP (at 25 C).           Modecular weight         20.0 C           Characteristic Stability of hazardous reactions         C           Citycarin         No information available           Statation to avoid         No information available           Citycarin         No information available           Statation to avoid         No information available           Citycarin         No information available           Materials to avoid         No information available           Citycarin         No information available           Information on likely routes of exposure         Information available           Signorin         No information available           Information on likely routes of exposure         Information available           Signorin         No information available           Can be absorbed by suction on and exinguisher         True           True         Can be absorbed by suction on ade available           Can be absorbed by suction on ade available         Can be absorbed by suction of staam           Can be absorbed by suction of staam         Can be absorbed by suction of staam           Giycerin         No information available </td <td>Vapor density</td> <td>3.1 ((air=1))</td>	Vapor density	3.1 ((air=1))
Self-ignition temporature     370 °C       Disassemble temporature     290 °C       Viscosity     954 cP (at 25 C).       Molecular weight     92.09       Chemical stability and possibility of hazardous reactions     Commention available       Gyperin     No information available       Materials to avoid     Commention available       Haterials to avoid     No information available       Gyperin     No information available       Haterials to avoid     Commention available       Gyperin     No information available       Haterials to avoid     Commention available       Byperin     No information available       Report     Throomation available       Harring Interview     No information available       Report     Colocidal INFORMATION       Information on likely routes of exposure     Information available       Report     Conta basched by suction of steam       Carn absorbed by suction of steam     Carn absorbed by suction of steam       Carl absorbed by inhalation, skin, digestive system     Can absorbed by inhalation, skin and digestive system       Report     LDS0 > 10000 mg/kg Rat (rat/LDSD/12800mg/kg(UCLID))       Ingestion     No information available       Gyperin     LDS0 > 10000 mg/kg Rat (rat/LDSD/12800mg/kg(UCLID))       Ingestion     No information available	Specific gravity	
Dessemble temperature         290 °:           Viecosity         954 oP (at 25 °);           Molecular weight         92,09           Chemical stability and possibility of hazardous reactions         Silvation to avoid           Giycerin         No information available           Harmful material produce by degradation         Information available           Giycerin         No information available           Harmful material produce by degradation         Information available           Ciycerin         No information available           Information on likely routes of exposure         Can abacho do by suction and extinguisher           Can abacho do by suction         Can abacho do by suction and extinguisher           Through skin, digestive system, can absorb body by suction and extinguisher         Can abacho do by by suction and extinguisher           Giycerin         Can bacho do by by suction and extinguisher           Can abacho do by suction and extinguisher         Can bacho do by by suction and extinguisher           Giycerin         Can bacho do by by suction and extinguisher           Giycerin         Do boo b		
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Chemical stability and possibility of hazardous reactions         No information available           Glycerin         No information available           Glycerin         No information available           Materials to avoid         Glycerin           Glycerin         No information available           Materials to avoid         Glycerin           Glycerin         No information available           Harmful material produce by degradation         Glycerin           Glycerin         No information available           Information on likely routes of exposure         Glycerin           Glycerin         No information division available           Information on likely routes of exposure         Glycerin           Glycerin         Irritation, difficult to breathe, area, vomit, diarrhea, headache, dizziness, Sleep           disorder, kidney problem, paralyzed         Can absorb body by suction           Gan absorb body by suction of steam         Can absorb body by suction of steam           Acute poison         Can basorb body by suction of steam           Glycerin         LD50 27200 mg/kg Rat (rat/LD50/12600mg/kg((UCLID))           Instation         Glycerin           Glycerin         No information on skin           Stin corrosion or irritation on skin         Stin corrosion or irritation           Glycerin	Molecular weight	92,09
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Information on likely routes of exposure       irritation, difficult to breathe, area, vomit, diarrhea, headache, dizziness, Sleep         Glycerin       irritation, difficult to breathe, area, vomit, diarrhea, headache, dizziness, Sleep         disorder, kidney problem, paralyzed       Can absorb body by suction         Can be absorbed by suction and extinguisher       Through skin, digestive system, can absorb body by inhalation of aerosol         Able to absorb body by suction of steam       Can be absorbed by inhalation, skin and digestive system         Health maleficence information       Can be absorbed by inhalation, skin and digestive system         Acute poison       Can be absorbed by inhalation, skin and digestive system         Glycerin       LD50 27200 mg/kg Rat (rat/LD50/12600mg/kg(IUCLID))         Insection       Glycerin         Glycerin       LD50 > 10000 mg/kg Rat         Glycerin       No information available         Skin corrosion or irritant agent       Glycerin         Glycerin       No irritation on skin         Serious eye damage or irritation       Glycerin         Glycerin       No irritation available         Skin hypersensitiveness       Glycerin         Glycerin       No information available         Skin hypersensitiveness       Glycerin         Glycerin       No information available         Skin	Glyœrin	No information available
Glycerin       initiation, difficult to breathe, area, vomit, diarrhea, headache, dizziness, Sleep         disorder, kidney problem, paralyzed       Can absorb body by suction         Can absorb body by suction and extinguisher       Can absorb body by suction and extinguisher         Through skin, digestive system, can absorb body by inhalation of aerosol       Able to absorbe body by suction of steam         Kaute poison       Can be absorbed by inhalation, skin and digestive system         Market       Loso 27200 mg/kg Rat (rat/LD50/12600mg/kg(IUCLID))         Inpestion       LD50 > 10000 mg/kg Rat (rat/LD50/12600mg/kg(IUCLID))         Inpestion       No irritation on exisi         Glycerin       No irritation on exisi         Glycerin       No information available         Skin hypersensitiveness       No information available	11. TC	DXICOLOGICAL INFORMATION
disorder, kidney problem, paralyzed Can absorb body by suction Can be absorbed by suction and extinguisher Through skin, digestive system, can absorb body by inhalation of aerosol Able to absorb body by suction of steam Can be absorbed by inhalation, skin and digestive system Health maleficence information Acute poison Oral Glycerin Ingestion Glycerin LD50 > 10000 mg/kg Rat (rat/LD50/12600mg/kg(IUCLID)) Ingestion Glycerin LD50 > 10000 mg/kg Rat Inhalation Skin corrosion or irritant agent Glycerin No information available Skrious eye damage or irritation Glycerin No irritation on skin Skrious eye damage or irritation Glycerin No information available Skrious eye damage or irritation Glycerin No information available Skrious eye damage or irritation Glycerin No information available Skin typersensitiveness Glycerin Mo information available Skin typersensitiveness Glycerin No information available Skin typersensitiveness Glycerin Skin typersensitivenes Glycerin Skin typersensitivenes Skin typersensitivenes Skin typersensitivenes Skin typersensitivenes Skin typersensitivenes Skin typersensitivenes Skin typersensi	Information on likely routes of exposure	
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Able to absorb body by suction of steam       Can be absorbed by inhalation, skin and digestive system       Health maleficence information       Acute poison       Oral       Glycerin     LD50 27200 mg/kg Rat (rat/LD50/12600mg/kg(IUCLID))       Instation       Glycerin     LD50 > 10000 mg/kg Rat       Inhalation       Glycerin     No information available       Skin corrosion or irritant agent       Glycerin     No irritation on skin       Serious eye damage or irritation       Glycerin     No irritation on skin       Serious eye damage or irritation       Glycerin     No irritation on eyes       Respiratory organ hypersensitiveness       Glycerin     No information available       Skin hypersensitiveness       Glycerin     No information available       Skin hypersensitiveness       Glycerin     No information available       Carcinogenic       Cocupational safety and health acts       Glycerin     No information available       Carcinogenic		Can be absorbed by suction and extinguisher
Health maleficence information       Can be absorbed by inhalation, skin and digestive system         Health maleficence information       Can be absorbed by inhalation, skin and digestive system         Acute poison       Dotal         Oral       Dotal         Glycerin       LD50 27200 mg/kg Rat (rat/LD50/12600mg/kg(IUCLID))         Ingestion       LD50 > 10000 mg/kg Rat (rat/LD50/12600mg/kg(IUCLID))         Ingestion       LD50 > 10000 mg/kg Rat         Inhalation       University of the system         Glycerin       No information available         Skin corrosion or irritant agent       No irritation on skin         Glycerin       No irritation on eyes         Respiratory organ hypersensitiveness       No information available         Glycerin       No information available         Skin hypersensitiveness       No information available         Glycerin       No information available         Gl		
Health maleficence information         Acute poison         Oral         Gilycerin       LD50 27200 mg/kg Rat (rat/LD50/12600mg/kg(IUCLID))         Ingestion       LD50 > 10000 mg/kg Rat (rat/LD50/12600mg/kg(IUCLID))         Inhalation       UD50 > 10000 mg/kg Rat (rat/LD50/12600mg/kg(IUCLID))         Inhalation       UD50 > 10000 mg/kg Rat         Gilycerin       No information available         Serious eye damage or irritation       No irritation on eyes         Gilycerin       No information available         Respiratory organ hypersensitiveness       No information available         Gilycerin       No information available         Skin hypersensitiveness       No information available         Gilycerin       No information available         Carcinogenic       No information available         Gilycerin       No informati		
Acute poison         Oral         Glycerin       LD50 27200 mg/kg Rat (rat/LD50/12600mg/kg(IUCLID))         Ingestion         Glycerin       LD50 > 10000 mg/kg Rat         Inhalation       Edigerin         Glycerin       No information available         Skin corrosion or irritant agent       Formation available         Glycerin       No information on skin         Serious eye damage or irritation       Formation on eyes         Glycerin       No information available         Serious eye damage or irritation       Formation available         Glycerin       No information available         Carcinogenic       Formation available         Glycerin       No information available	Health maleficence information	Can be absorbed by inhalation, skin and digestive system
Oral       LD50 27200 mg/kg Rat (rat/LD50/12600mg/kg(IUCLID))         Ingestion       LD50 > 10000 mg/kg Rat         Glycerin       LD50 > 10000 mg/kg Rat         Inhalation       Inhalation         Glycerin       No information available         Skin corrosion or irritant agent       Inhalation on skin         Glycerin       No irritation on skin         Serious eye damage or irritation       Initiation on eyes         Glycerin       No irritation on eyes         Respiratory organ hypersensitiveness       Information available         Glycerin       No information available         Skin hypersensitiveness       Information available         Glycerin       No information available         Carcinogenic       Information available         Glycerin       No info		
Glycerin       LD50 27200 mg/kg Rat (rat/LD50/12600mg/kg(IUCLID))         Ingestion       LD50 > 10000 mg/kg Rat         Glycerin       LD50 > 10000 mg/kg Rat         Thalation       No information available         Glycerin       No information available         Skin corrosion or irritant agent       No irritation on skin         Glycerin       No irritation on skin         Glycerin       No irritation on skin         Skin corrosion or irritation       No irritation on eyes         Glycerin       No information available         Skin hypersensitiveness       No information available         Glycerin       No information available         Carcinogenic       No information available         Glycerin       No inf		
Ingestion     LD50 > 10000 mg/kg Rat       Inhalation     Inhalation       Glycerin     No information available       Skin corrosion or irritant agent     No irritation on skin       Glycerin     No irritation on skin       Serious eye damage or irritation     No irritation on eyes       Respiratory organ hypersensitiveness     No information available       Glycerin     No information available       Skin hypersensitiveness     Information available       Glycerin     No information available       Carcinogenic     No information available       Carcingenic     No information available       Glycerin     No information available       Enployment announcement     No information available		LD50.27200 mg/kg Rat. (rat/LD50/12600mg/kg(ULCLID))
Glycerin       LD50 > 10000 mg/kg Rat         Inhalation       No information available         Glycerin       No information available         Skin corrosion or irritant agent       Voirritation on skin         Glycerin       No irritation on skin         Serious eye damage or irritation       No irritation on eyes         Glycerin       No information available         Serious eye damage or irritation       No information available         Glycerin       No information available         Glycerin       No information available         Skin hypersensitiveness       No information available         Glycerin       No information available         Carcinogenic       Voinformation available         Occupational safety and health acts       No information available         Glycerin       No information available         Employment announcement       No information available		
Inhalation     No information available       Glycerin     No information available       Skin corrosion or irritant agent     No irritation on skin       Glycerin     No irritation on skin       Glycerin     No irritation on eyes       Respiratory organ hypersensitiveness     No information available       Skin hypersensitiveness     No information available       Glycerin     No information available       Skin hypersensitiveness     No information available       Glycerin     No information available       Carcinogenic     Vo information available       Occupational safety and health acts     No information available       Glycerin     No information available	-	LD50 > 10000 mg/kg Rat
Glycerin       No information available         Skin corrosion or irritant agent       Image: Stripping of Strip		
Skin corrosion or irritant agent       No irritation on skin         Glycerin       No irritation on eyes         Glycerin       No irritation on eyes         Respiratory organ hypersensitiveness       No information available         Skin hypersensitiveness       No information available         Glycerin       No information available         Skin hypersensitiveness       No information available         Glycerin       No information available         Carcinogenic       No information available         Occupational safety and health acts       No information available         Glycerin       No information available	Glycerin	No information available
GlycerinNo irritation on skinSerious eye damage or irritationNo irritation on eyesGlycerinNo irritation on eyesGlycerinNo information availableSkin hypersensitivenessNo information availableGlycerinNo information availableCarcinogenicNo information availableOccupational safety and health actsNo information availableGlycerinNo information availableEmployment announcementNo information available		
Serious eye damage or irritation       No irritation on eyes         Glycerin       No irritation on eyes         Glycerin       No information available         Skin hypersensitiveness       No information available         Glycerin       No information available         Carcinogenic       No information available         Occupational safety and health acts       No information available         Glycerin       No information available         Employment announcement       No information available		No irritation on skin
Glycerin       No irritation on eyes         Glycerin       No information available         Skin hypersensitiveness       No information available         Glycerin       No information available         Carcinogenic       No information available         Glycerin       No information available         Fundament       No information available		
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Glycerin     No information available       Skin hypersensitiveness     No information available       Glycerin     No information available       Carcinogenic     Occupational safety and health acts       Glycerin     No information available       Glycerin     No information available       Employment announcement     Vo information available	· · · · · · · · · · · · · · · · · · ·	
Skin hypersensitiveness       No information available         Glycerin       No information available         Occupational safety and health acts       No information available         Glycerin       No information available         Employment announcement       Volume to the second		No information available
Glycerin No information available   Carcinogenic Occupational safety and health acts   Occupational safety and health acts No information available   Glycerin No information available   Employment announcement Volume of the set of the		
Carcinogenic         Occupational safety and health acts         Glycerin       No information available         Employment announcement		No information available
Occupational safety and health acts       No information available         Glycerin       No information available         Employment announcement       No information available		
Glycerin     No information available       Employment announcement     No information available		
Employment announcement		No information available
	Glycerin	No information available

IARC	
Glycerin	No information available
OSHA	
Glycerin	No information available
ACGIH	
Glycerin	No information available
NTP	
Glycerin	No information available
EU CLP	
Glycerin	No information available
Germ cell mutagenicity	
Glycerin	Many color mammal red blood cell/negative
Reproduction toxicity test	
Glycerin	No information available
Special target poison (1 time exposer)	
Glycerin	No information available
Special target poison (long exposer)	
Glycerin	rat(inhale):1-4mg/l
	epiglottis epithelium
Absorption injurious	
Glycerin	No information available
12	2. ECOLOGICAL INFORMATION

#### Ecotoxicity

#### Fish

Glycerin

Crustacean

Glycerin

### Algae

Glycerin Residual fungicide and resolvability Residual fungicide Glycerin Resolvability

Glycerin

Life enrichment

### Enrichment

Glycerin

## Biodegradability

Glycerin

## Soil

Glycerin

## Other harmful influences

Glycerin

LC50 5000 mg/l 24 hr Carassius auratus

EC50 > 10000 mg/ℓ 24 hr Daphnia magna (Daphnia magna EC50(24HR) 10000mg/L(US EPA ECOTOX); Daphnia magna EC50(24HR) >10000 mg/L (EU IUCLID))

(LC50(96hr) 77712.039 mg/L)

No information available

No information available

No expected life enrichment

63 (%) 14 day Fast biodegradability (OECD SIDS), 93% biodegradability in 30 days (OECD TG 301D) (IUCLID))

No information available

Environmental summary : No information on toxicity on aquatic organisms

13. DISPOSAL CONSIDERATIONS	
Waste treatment method	
Glycerin	No information available
Disposal considerations	
Glycerin	Dispose container and content according to the waster control act
14. T	RANSPORT INFORMATION
IATA	
Propriety shipping name	
Glycerin	No dangerous good in sense of these transport regulations
Hazard class	
Glycerin	No information available
Subsidiary class	
Glycerin	No information available
Packing group	
Glycerin	No information available
UN-No	
Glycerin	No information available
Environmental hazards	
Glycerin	No information available
15. RE	EGULATORY INFORMATION
Regulations of occupational safety and health act	No information available
Glycerin	Exposure standard materials
Regulations of toxic chemicals regulation act	
Glycerin	No information available
Regulations of safety control of dangerous substances act	
Glycerin	4th class The third kind Petroleum(Receptivity) 4000 L
Regulations of waste control act	
Glycerin	Designated waste
Regulations of other domestic and international act	
Domestic act	
Persistent organic pollutants control act	
Glycerin	No information applicable
Foreign act	
American supervision information	
Glycerin CERCLA	No information applicable
Glycerin EPCRA 302	No information applicable
Glycerin EPCRA 304	No information applicable
Glycerin EPCRA 313	No information applicable
Glycerin	No information applicable
American supervision information (Rotterdam agreement material)	
Glycerin	No information applicable
American supervision information (Stockholm agreement material)	
Glycerin	No information applicable
American supervision information (Montreal protocol material)	
Glycerin	No information applicable

# EU Classification information (Confirmed classification results)

### Glycerin EU Classification information (Danger expression)

Glycerin

# EU Classification information (Safety expression)

Glycerin

No information applicable

No information applicable

### **16. OTHER INFORMATION**

Source of material IUCLID (oral) SIDS (oral) SIDS (skin corrosive or irritant) SIDS (severe eye damage or irritation) NLM (Germ Cell Mutagenesis) IUCLID (specific target organ toxicity (repeated exposure)) OECD SIDS (fish) EU IUCLID (Crustaceans) OECD SIDS (Crustaceans) US EPA ECOTOX (Crustaceans) ECOSAR (agar) OECD SIDS (Enrichment) IUCLDE (biodegradable) OECD SIDS (biodegradable) OECD TG 301C (biodegradable) OEDC TG 301D (biodegradable)

The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since Nippon Genetics Europe cannot control the actual methods, volumes, or conditions of use, the company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein.

Questions about the information found on this MSDS should be directed to info@nippongenetics.de.

End of Material Safety Data Sheet