Rose

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Product name : Rose

1.2. Recommended use and restrictions on use

1.3.

1.4. Emergency telephone number

Emergency number : Chemtrec 1-800-424-9300 (ACCT# CCN725182)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids, Category 4	Combustible liquid
Acute toxicity (inhalation:dust,mist) Category 4	Harmful if inhaled.
Serious eye damage/eye irritation, Category 1	Causes serious eye damage.
Skin sensitisation, Category 1	May cause an allergic skin reaction.

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger

Hazard statements (GHS US) : Combustible liquid
May cause an allergic skin reaction.
Causes serious eye damage.
Harmful if inhaled.

Precautionary statements (GHS US) : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin: Wash with plenty of water.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center or doctor.
Call a poison center or doctor if you feel unwell.
Specific treatment (see supplemental first aid instruction on this label).
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
In case of fire: Use media other than water to extinguish.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
DPG / Dipropylene Glycol	(CAS-No.) 25265-71-8	30-50	Acute Tox. 4 (Inhalation:dust,mist), H332
Phenyl Ethyl Alcohol	(CAS-No.) 60-12-8	10-30	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:dust,mist), H332 Eye Irrit. 2, H319
Geraniol 60	(CAS-No.) 106-25-2	5-10	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1B, H317
Linalool	(CAS-No.) 78-70-6	1-5	Flam. Liq. 4, H227 Skin Sens. 1B, H317 Aquatic Acute 3, H402
Rose Crystals	(CAS-No.) 90-17-5	1-5	Skin Irrit. 2, H315
Geranyl Acetate	(CAS-No.) 105-87-3	0.1-1	Skin Irrit. 2, H315 Skin Sens. 1, H317
Phenyl Acetaldehyde	(CAS-No.) 122-78-1	0.1-1	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
Citral	(CAS-No.) 5392-40-5	0.1-1	Flam. Liq. 4, H227 Eye Irrit. 2, H319 Skin Sens. 1, H317

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.

First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after skin contact : May cause an allergic skin reaction.

Symptoms/effects after eye contact : Serious damage to eyes.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

Fire hazard : Combustible liquid.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

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 : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

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.

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 : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. 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 in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Citral (5392-40-5)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Citral
ACGIH TWA (ppm)	5 ppm (Inhalable fraction and vapor)
Remark (ACGIH)	Body weight eff; URT irr; eye dam; Skin; DSEN; A4 (Not classifiable as a Human Carcinogen: Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of a lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories)
Regulatory reference	ACGIH 2018

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s):

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	Mixture contains one or more component(s) which have the following colour(s): Colourless to white White Colourless Colourless to light yellow Light yellow On exposure to air: brown Light yellow to colourless
Odour	:	There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure. Mixture contains one or more component(s) which have the following odour: Pleasant odour Floral odour Unpleasant odour Irritating/pungent odour Fruity odour Lemon odour Strong odour Aromatic odour Phenol odour Sweet odour Characteristic odour Almost odourless Alcohol odour
Odour threshold	:	No data available
pH	:	No data available
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Relative evaporation rate (butylacetate=1)	:	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
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive limits	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

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 (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Harmful if inhaled.

ATE US (dust,mist)	2.668 mg/l/4h
Rose Crystals (90-17-5)	
LD50 dermal rabbit	> 2000 mg/kg (OECD 402: Acute Dermal Toxicity, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 5 mg/l air (OECD 403: Acute Inhalation Toxicity, 6 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 14 day(s))
ATE US (oral)	2000 mg/kg bodyweight
Phenyl Ethyl Alcohol (60-12-8)	
LD50 oral rat	1603 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	2535 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 4.63 mg/l (4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 14 day(s))
ATE US (oral)	1603 mg/kg bodyweight
ATE US (dermal)	2535 mg/kg bodyweight
ATE US (dust,mist)	1.5 mg/l/4h
Citral (5392-40-5)	
LD50 oral rat	4960 mg/kg (Rat, Oral)
LD50 dermal rat	> 2000 mg/kg (Rat, Dermal)
LD50 dermal rabbit	2250 mg/kg (Rabbit, Dermal)
ATE US (oral)	4960 mg/kg bodyweight
ATE US (dermal)	2250 mg/kg bodyweight
Geranyl Acetate (105-87-3)	
LD50 oral rat	6300 mg/kg (Rat, Oral)
ATE US (oral)	6300 mg/kg bodyweight
Linalool (78-70-6)	
LD50 oral rat	2790 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male/female, Experimental value)
LD50 dermal rabbit	5610 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Experimental value)
ATE US (oral)	2790 mg/kg bodyweight
ATE US (dermal)	5610 mg/kg bodyweight
Geraniol 60 (106-25-2)	
LD50 oral rat	4500 mg/kg (Rat, Oral)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit, Dermal)
ATE US (oral)	4500 mg/kg bodyweight
Phenyl Acetaldehyde (122-78-1)	
ATE US (oral)	500 mg/kg bodyweight

DPG / Dipropylene Glycol (25265-71-8)	
LD50 oral rat	> 5000 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male/female, Experimental value)
LD50 dermal rabbit	> 5010 mg/kg bodyweight (Equivalent or similar to OECD 402, Rabbit, Male/female, Experimental value)
LC50 Inhalation - Rat	2.34 mg/l (Equivalent or similar to OECD 403, Rat, Male/female, Experimental value)
ATE US (vapours)	2.34 mg/l/4h
ATE US (dust,mist)	2.34 mg/l/4h

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Causes serious eye damage.

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

Symptoms/effects after skin contact : May cause an allergic skin reaction.

Symptoms/effects after eye contact : Serious damage to eyes.

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.

Rose Crystals (90-17-5)	
EC50 Daphnia 1	16.8 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)

Phenyl Ethyl Alcohol (60-12-8)	
LC50 fish 1	215 – 464 mg/l (DIN 38412: German standard methods for the examination of water, waste water and sludge, 96 h, Leuciscus idus, Static system, Fresh water, Experimental value, Lethal)
EC50 Daphnia 1	287.17 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 (algae)	1300 mg/l (DIN 38412: German standard methods for the examination of water, waste water and sludge, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration)

Citral (5392-40-5)	
LC50 fish 1	4.6 – 10 mg/l (96 h, Leuciscus idus, Literature study)
EC50 Daphnia 1	7 mg/l (48 h, Daphnia magna, Literature study)

Geranyl Acetate (105-87-3)	
LC50 fish 1	68.12 mg/l (DIN 38412: German standard methods for the examination of water, waste water and sludge, 96 h, Leuciscus idus, Static system, Fresh water, Read-across)
EC50 Daphnia 1	14.1 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)

Linalool (78-70-6)	
LC50 fish 1	27.8 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value)

Linalool (78-70-6)	
EC50 Daphnia 1	59 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
ErC50 (algae)	156.7 mg/l (DIN 38412-9, 96 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value)

Geraniol 60 (106-25-2)	
LC50 fish 1	20.3 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Semi-static system, Fresh water, Experimental value, GLP)
EC50 Daphnia 1	32.4 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
ErC50 (algae)	9.54 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

DPG / Dipropylene Glycol (25265-71-8)	
LC50 other aquatic organisms 1	3181 mg/l (Other, 48 h, Xenopus laevis, Fresh water, Experimental value)

12.2. Persistence and degradability

Rose Crystals (90-17-5)	
Persistence and degradability	Readily biodegradable in water.

Phenyl Ethyl Alcohol (60-12-8)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.45 g O_2/g substance
Chemical oxygen demand (COD)	2.5 g O_2/g substance
ThOD	2.6 g O_2/g substance

Citral (5392-40-5)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.556 g O_2/g substance
Chemical oxygen demand (COD)	1.99 g O_2/g substance
ThOD	2.84 g O_2/g substance

Geranyl Acetate (105-87-3)	
Persistence and degradability	Readily biodegradable in water.
ThOD	2.6 g O_2/g substance

Linalool (78-70-6)	
Persistence and degradability	Readily biodegradable in water.

Geraniol 60 (106-25-2)	
Persistence and degradability	Readily biodegradable in water.

Phenyl Acetaldehyde (122-78-1)	
Persistence and degradability	Not readily biodegradable in water.

DPG / Dipropylene Glycol (25265-71-8)	
Persistence and degradability	Readily biodegradable in water.

12.3. Bioaccumulative potential

Rose Crystals (90-17-5)	
BCF fish 1	8 (Experimental value)
Partition coefficient n-octanol/water (Log Pow)	3.535 (Practical experience/observation, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Phenyl Ethyl Alcohol (60-12-8)	
BCF fish 1	2.036 l/kg (BCFBAF v3.01, Estimated value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	1.3 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Citral (5392-40-5)	
BCF other aquatic organisms 1	250 (Estimated value)
Partition coefficient n-octanol/water (Log Pow)	2.76 – 3.45 (Estimated value)
Bioaccumulative potential	Bioaccumable.

Geranyl Acetate (105-87-3)	
BCF other aquatic organisms 1	1500 (Estimated value)
Partition coefficient n-octanol/water (Log Pow)	4.04 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method)
Bioaccumulative potential	Potential for bioaccumulation (4 ≥ Log Kow ≤ 5).

Linalool (78-70-6)	
Partition coefficient n-octanol/water (Log Pow)	2.84 (Experimental value, Equivalent or similar to OECD 107, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Geraniol 60 (106-25-2)	
Partition coefficient n-octanol/water (Log Pow)	3.47 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Phenyl Acetaldehyde (122-78-1)	
Partition coefficient n-octanol/water (Log Pow)	1.8
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

DPG / Dipropylene Glycol (25265-71-8)	
Bioaccumulative potential	Bioaccumulation: not applicable.

12.4. Mobility in soil

Rose Crystals (90-17-5)	
Partition coefficient n-octanol/water (Log Koc)	2.748 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)
Ecology - soil	Low potential for adsorption in soil.

Phenyl Ethyl Alcohol (60-12-8)	
Surface tension	59.7 mN/m (20 °C, 1 g/l, OECD 115: Surface Tension of Aqueous Solutions)
Partition coefficient n-octanol/water (Log Koc)	1.5 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)
Ecology - soil	Highly mobile in soil.

Geranyl Acetate (105-87-3)	
Partition coefficient n-octanol/water (Log Koc)	3.06 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Low potential for mobility in soil.

Linalool (78-70-6)	
Surface tension	8.3 mN/m (20 °C)
Ecology - soil	No (test)data on mobility of the substance available.

Geraniol 60 (106-25-2)	
Partition coefficient n-octanol/water (Log Koc)	1.9738 (log Koc, SRC PCKOCWIN v2.0, QSAR)
Ecology - soil	Highly mobile in soil.

DPG / Dipropylene Glycol (25265-71-8)	
Surface tension	71.4 mN/m (22 °C, 1.01 g/l)
Partition coefficient n-octanol/water (Log Koc)	0.78 (log Koc, Calculated value)
Ecology - soil	Low potential for adsorption in soil.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated

SECTION 15: Regulatory information

International Inventories:

TSCA	Complies
DSL/NDSL	Complies

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

15.3. US State regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

Component	State or local regulations
DPG / Dipropylene Glycol(25265-71-8)	U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SDS US (GHS HazCom 2012)

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.