Material Safety Data Sheet

PHENYL CHLOROFORMATE FOR SYNTHESIS (RXSOL-60-6605-219)

1. Product and Company Identifaction

Product Name	PHENYL CHLOROFORMATE FOR SYNTHESIS
Part Number	RXSOL-60-6605-219

Company Details:

RX MARINE INTERNATIONAL
105, A wing , BSEL , TECH PARK.
VASHI ,NEW BOMBAY 400703 INDIA

Branch : Kandla, Mumbai , Chennai, Vizag, Kolkata, UAE , OMAN , CANADA and KENYA

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Email	mail@rxmarine.com
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2. Composition / informationon ingredients

Chemical Name	CAS	EC number	Weight
PHENYL CHLOROFORMATE FOR SYNTHESIS	1885-14-9	217-547-8	156.57

3. Hazards Identification

Signal Word	Danger
Hazard Statements	H290 May be corrosive to metals. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H330 Fatal if inhaled.
P280 Wear protective gloves.P305 + P351 + P338	Wear eye protection/ face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Precautionary statements - response	P234 Keep only in original packaging. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301 + P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Response	None
Disposal	NA
Prevention	NA
Supplemental Hazard Statements	None
Other hazards	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

4. First Aid Measures

General advice	First aiders need to protect themselves. Show this material safety data sheet to the doctor
If inhaled	After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.
Eye Contact	After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.
swallowed	After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.
Skin Contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.
Inhalation:	NA
Ingestion:	NA
Notes to Physician	NA
If swallowed	After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.
Most important symptoms and effects, both acute and delaye	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
Indication of any immediate medical attention and special treatment needed	No data available

5. Fire-fighting Measures

Flammability	NA
Flash Point	NA
Suitable extinguishing media	Carbon dioxide (CO2) Dry powder
Unsuitable extinguishing media	Foam Water
Special hazards arising from the substance or mixture	Carbon oxides Hydrogen chloride gas Combustible. Fire may cause evolution of: Hydrogen chloride gas, Phosgene Caution! in contact with water product releases: Hydrogen chloride gas Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.
Further information	Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.
Hazardous combustion products	NA.
Advice for firefighters	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
Protective Equipment	NA
Specific Hazards Arising from the Chemical	NA

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.
Spillage	NA.
Personal Protection	NA
Enviromental Precaution	Do not let product enter drains.
Methods and materials for containment and cleaning	Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions(see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.
Reference to other sections	For disposal see section 13.

7. Handling and Storage

Advice on safe handling	Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.
Advice on protection against fire and explosion	Keep away from open flames, hot surfaces and sources of ignition.Take precautionary measures against static discharge.
Hygiene measures	Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.
Precautions for safe handling	NA
Conditions for safe storage, including any incompatibilities	NA
Storage conditions	Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons. Recommended storage temperature see product label.
Storage conditions	NA
Storage class	Storage class (TRGS 510): 6.1A: Combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials
Specific end use(s)	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
Handling	NA
Advice on general occupational hygiene	NA

8. Exposure controls and personal protection

Occupational Exposure limit values	No data available
Biological limit values	No data available
Exposure controls	NA
Engineering Control	NA
Eye/face protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety
Body Protection	protective clothing
Skin protection	This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Full contact Material: Viton® Minimum layer thickness: 0,7 mm Break through time: 480 min Material tested:Vitoject® (KCL 890 / Aldrich Z677698, Size M) This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Splash contact Material: butyl-rubber Minimum layer thickness: 0,7 mm Break through time: 240 min Material tested:Butoject® (KCL 898)
Respiratory protection	Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.
Other Protection Measure	NA
Control of environmental exposure	Do not let product enter drains.
Thermal hazards	No data available



Gloves



Suit

9. Physical and chemical properties

Physical state	iquid
Colour	light yellow
Odour	No data available
Odor Threshold	Not Applicable
pH	Not Applicable
Melting Point	Melting point/range: -25 °C
Boiling Point	74 - 75 °C at 17 hPa 187 - 189 °C at 1.013 hPa
Flash Point	69 °C - closed cup
Evaporation Rate	Not Applicable
Flammability (solid, gas)	No data available
Explosive limits	No Data Available
Upper/lower flammability or explosive limits	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Vapour pressure	0,89 hPa at 20 °C 5,51 hPa at 50 °C
Density	1,244 g/cm3
Vapour Density	No Data Available
Specific Gravity	No data available
Partition coefficient	No data available
Explosive properties	None
Solubility	No data available
Ignition temperature	No information available.
Particle characteristics	No data available
Other safety information	Relative vapor density 5,41 - (Air = 1.0)

10. Stability and reactivity

Reactivity	Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.
Stability	The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions	No data available
Conditions to avoid	No data available
Incompatible materials	Bases, Strong bases, Alcohols, Amines
Hazardous Polymerization	In the event of fire: see section 5

11. Toxicological information

Acute toxicity	LD50 Oral - Rat - 1.754 mg/kg LC50 Inhalation - Rat - 4 h - 280 mg/m3 - vapor LD50 Dermal - Rabbit - 4.939 mg/kg
Skin corrosion/irritation	Skin - Rabbit Result: Skin irritation - 24 h
Serious eye damage/eye irritation	Eyes - Rabbit Result: Severe eye irritation - 24 h
Respiratory or skin sensitization	Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.
Serious eye damage/eye irritation	Eyes - Rabbit Result: Severe eye irritation - 24 h
Rout Of Entry	Inhalation. Ingestion.
Toxicity to Animal	NA

Toxic Effects on Human	NA
Germ cell mutagenicity	No data available
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	Inhalation - May cause respiratory irritation
Special Remarks on other Toxi Effects on Humans:	NA
Additional Information	Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea
Assessment	NA
Endocrine disrupting properties	NA

12. Ecological information

Persistence and degradability	No data available
Toxicity	Toxicity to fish LC50 - Leuciscus idus (Golden orfe) - 10,6 mg/l - 48 h
Bioaccumulative potential	No data available
Toxicity to fish	NA
Toxicity to daphnia and other aquatic invertebrates	NA
Toxicity to algae	NA
Eco Toxicity	Not Available
COD and BOD 5	Not Available
Products Biodegradation:	NA
Mobility in soil	No Information available
Results of PBT and vPvB assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Endocrine disrupting properties	No data available
Assessment	na
Other adverse effects	No data available (Stability in water)
Remarks	Hydrolyzes readily.

13. Disposal considerations

Disposal methods	NA
Contaminated packaging	NA
Waste treatment Method	Product See www.retrologistik.com for processes regarding the return of chemicals and

14. Transport information

UN number	ADR/RID: 2746 IMDG: 2746 IATA: 2746
UN proper shipping name	ADR/RID: PHENYL CHLOROFORMATE IMDG: PHENYL CHLOROFORMATE IATA: Phenyl chloroformate

Transport hazard class(es)	ADR/RID: 6.1(8) IMDG: 6.1(8) IATA: 6.1 (8)
Packaging group	ADR/RID: II IMDG: II IATA: II
Environmental hazards	ADR/RID: No IMDG: No IATA: No
Special precautions for user	No data available
Further information	No data available.
Tunnel restriction code	(D/E)
Transport in bulk according to IMOinstruments	No data available

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture	This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.
Safety, health and environmental regulations specific for the product in question	NA
National legislation	Seveso III: Directive 2012/18/EU of the European : ACUTE TOXIC Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
DSCL (EEC)	NA
Other regulations	Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable
Chemical Safety Assessment	For this product a chemical safety assessment was not carried out

16. Other information

Other Information	The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and weassume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Rx Marine International has been advised of the possibility of such damages.