

1. Product and Company Identification

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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

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2. Composition / Information on ingredients

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

3. Hazards Identification

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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. H335 May cause respiratory irritation.H290 May be corrosive to metals. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H330 Fatal if inhaled. H335 May cause respiratory irritation.
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.

None

NA

NA

None

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.

Response

Disposal

Prevention

Supplemental Hazard Statements

Other hazards

4. First Aid Measures

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General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor

in attendance. First aiders need to protect themselves. Show this material safety data sheet to the doctor

in attendance.

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

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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
Further information	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.
Hazardous combustion products	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.
Advice for firefighters	NA.
Protective Equipment	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
Specific Hazards Arising from the Chemical	NA

6. Accidental Release Measures

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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
Environmental 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

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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
Hygiene measures	measures against static discharge.
Precautions for safe handling	Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.
Conditions for safe storage, including any incompatibilities	NA
Storage conditions	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
Specific end use(s)	hazardous materials 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

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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 goggles Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles
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 entrepreneur has to ensure that maintenance, cleaning and

Other Protection Measure
Control of environmental exposure
Thermal hazards

testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

NA

Do not let product enter drains.

No data available



Gloves Suit

9. Physical and chemical properties

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Physical state	liquid
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

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

11. Toxicological information

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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

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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

Endocrine disrupting properties	persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Assessment	No data available
Other adverse effects	na
Remarks	No data available (Stability in water) Hydrolyzes readily.

13. Disposal considerations

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Disposal methods	NA
Contaminated packaging	NA
Waste treatment Method	Product See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.Product See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

14. Transport information

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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 IMO instruments	No data available

15. Regulatory information

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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 NA 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

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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 we assume 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 we 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.

DISCLAIMER OF LIABILITY : The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

PALLADIUM ACETATE RXSOL-60-6605-160

PALLADIUM HYDROXIDE 20% ON CHARCOAL RXSOL-60-6605-163

PALLADIUM NITRATE 44% PD content RXSOL-60-6605-164

PALLADIUM SPONGE 99.9% POWDER RXSOL-60-6605-165

PALLADIUM CALCIUM CARBONATE 10% pd RXSOL-60-6605-166

PARAFFIN WAX 58 60C BLOCK BRICKS RXSOL-60-6605-180

P DIMETHYL AMINO BENZALDEHYDE AR RXSOL-60-6605-192

P DIMETHYL AMINO CINNAMALDEHYDE AR RXSOL-60-6605-193

PEPTONE BACTERIOLOGICAL GRANULAR RXSOL-60-6605-197

PETROLEUM ETHER 100-2000 C FOR SYNTHESIS RXSOL-60-6605-205

PHENOL RED INDICATOR SOLUTION RXSOL-60-6605-215

PHENOLDISULPHONIC ACID SOLUTION 25% RXSOL-60-6605-216

PHENOLPHTHALEIN INDICATOR RXSOL-60-6605-218

PHENYL CHLOROFORMATE FOR SYNTHESIS RXSOL-60-6605-219

PHENYL HYDRAZINE AR RXSOL-60-6605-220

PHENYL HYDRAZINE FOR SYNTHESIS RXSOL-60-6605-221

PHENYL HYDRAZINE HYDROCHLORIDE AR RXSOL-60-6605-223

PHENYL MERCURY ACETATE FOR SYNTHESIS RXSOL-60-6605-224

PHENYL PHOSPHATE DISODIUM SALT AR RXSOL-60-6605-226

PHENYL TRIMETHYL AMMONIUM CHLORIDE RXSOL-60-6605-227

PHLOXIN B FOR MICROSCOPY RXSOL-60-6605-229

PHTHALAMIDE FOR SYNTHESIS RXSOL-60-6605-237

PHTHALIC ACID AR RXSOL-60-6605-238

PHTHALIC ACID FOR SYNTHESIS RXSOL-60-6605-239

PHTHALIC ANHYDRIDE FOR SYNTHESIS RXSOL-60-6605-249

PHTHALIDE FOR SYNTHESIS RXSOL-60-6605-250

PHTHALIMIDE FOR SYNTHESIS RXSOL-60-6605-251

PICRIC ACID SOLUTION AR 1.2% RXSOL-60-6605-256

PIPERAZINE Anhydrous 98% RXSOL-60-6605-257

PIPERAZINE Anhydrous 98% RXSOL-60-6605-257

PIPES BUFFER piperazine NN-Bis-2-Ethene Sulfonic acid RXSOL-60-6605-260

PLATINIUM OXIDE Pt 80% RXSOL-60-6605-261

POLYETHYLENE GLYCOL 600 RXSOL-60-6605-269

POLYVINYL PYRROLIDONE PVP RXSOL-60-6605-241

PONCEAU S FOR ELECTROPHORESIS RXSOL-60-6605-242

POPOP Scintillation Grade 1 4-bis(5-phenyloxaza-2-yl) benzene RXSOL-60-6605-243

POPSO BUFFER FOR BIOCHEMISTRY RXSOL-60-6605-244

POTASSIUM ACETATE AR RXSOL-60-6605-245

POTASSIUM ACETATE LR RXSOL-60-6605-246

SODAMIDE RXSOL-60-6605-451

SODIUM ACETATE TRIHYDRATE AR RXSOL-60-6605-462

SODIUM ARSENITE SOLUTION AR 0.1N N10 RXSOL-60-6605-468

SODIUM BENZOATE AR RXSOL-60-6605-472

SODIUM BISELENITE Sodium Hydrogen Selenite RXSOL-60-6605-473

SODIUM BROMATE LR RXSOL-60-6605-481

SODIUM BROMIDE AR RXSOL-60-6605-482

SODIUM BROMIDE LR RXSOL-60-6605-483

SODIUM CHLORIDE SOLUTION 85% wv RXSOL-60-6605-488

SODIUM CHROMATE TETRAHYDRATE LR RXSOL-60-6605-490

SODIUM DI CHLOROISOCYANURATE RXSOL-60-6605-495

SODIUM HYDROXIDE SOLUTION IN 1M N1 RXSOL-60-6605-519

SODIUM LAURYL SULPHATE AR 99% RXSOL-60-6605-529

SODIUM LAURYL SULPHATE POWDER LR RXSOL-60-6605-531

SODIUM META BORATE TETRAHYDRATE LR RXSOL-60-6605-534

SODIUM METHOXIDE AR RXSOL-60-6605-535

SODIUM METHOXIDE POWDER LR RXSOL-60-6605-536

SODIUM MOLYBDATE AR DIHYDRATE RXSOL-60-6605-537

SODIUM NITRITE AR RXSOL-60-6605-541

SODIUM NITRITE LR RXSOL-60-6605-542

SODIUM NITRO PRUSIDE AR RXSOL-60-6605-543

SODIUM NITRO PRUSIDE LR RXSOL-60-6605-544

SODIUM OXALATE AR RXSOL-60-6605-545

SODIUM PERBORATE TRIHYDRATE PURE RXSOL-60-6605-548

SODIUM PER CARBONATE GRANULAR RXSOL-60-6605-549

SODIUM PER CARBONATE TABLET RXSOL-60-6605-550

SODIUM PERSULPHATE AR RXSOL-60-6605-553

SODIUM PERSULPHATE LR RXSOL-60-6605-554

SODIUM PHOSPHATE DI BASIC DIHYDRATE RXSOL-60-6605-559

SODIUM PYRUVATE RXSOL-60-6605-562

SODIUM SALICYLATE AR RXSOL-60-6605-563

SODIUM SELENITE AR ANHYDROUS RXSOL-60-6605-566

SODIUM SELENITE LR ANHYDROUS RXSOL-60-6605-567

SODIUM SELENITE PENTAHYDRATE LR RXSOL-60-6605-568

SODIUM SILICATE POWDER META HYDRATED RXSOL-60-6605-569

SODIUM SILICATE SOLUTION RXSOL-60-6605-570

SODIUM SILICO FLUORIDE 99% RXSOL-60-6605-571

SODIUM STANNATE LR RXSOL-60-6605-572

SODIUM SULPHATE ANHYDROUS AR RXSOL-60-6605-573

SODIUM SULPHIDE FLAKES AR RXSOL-60-6605-576

SODIUM SULPHITE ANHYDROUS AR RXSOL-60-6605-577

SODIUM SULPHITE ANHYDROUS LR RXSOL-60-6605-578

SODIUM TELLURITE 96% RXSOL-60-6605-579

SODIUM Tert BUTOXIDE 98% RXSOL-60-6605-580

SODIUM THIOCYANATE AR RXSOL-60-6605-581

SODIUM THIOSULPHATE AR PENTAHYDRATE RXSOL-60-6605-583