



# CHEMICAL PRODUCT SAFETY DATA SHEET

Prepared in accordance with GB/T 16483 and GB/T 17519.

Company name: CRC Industries Trading (Shanghai) Co., Ltd. Product name: CO Contact Cleaner®

Issue date: 09-01-2016  
Revision date: 02-28-2017  
Version #: 03  
SDS No: -

## 1. Chemical product and company identification

<b>Product name</b>	<b>CO Contact Cleaner®</b>
<b>Product code</b>	PR02016C
<b>Company name</b>	CRC Industries Trading (Shanghai) Co., Ltd.
<b>Address</b>	Room 2408, No. 488 South Wuning Road Jingan District - 200042 Shanghai, PR China
<b>General Information</b>	+86 (0) 21 6236 6035
<b>24-Hour Emergency</b>	+86 532 83889090
<b>Website</b>	www.crcindustries.cn

### Recommended use and Limitations on use

<b>Recommended use</b>	Electronics cleaner
<b>Issue date</b>	09-01-2016
<b>Revision date</b>	02-28-2017
<b>Supersedes date</b>	09-01-2016

## 2. Hazards identification

<b>Emergency overview</b>	Aerosol. CONTENTS UNDER PRESSURE. Pressurized container may rupture when exposed to heat or flame. May be fatal if swallowed and enters airways. May be harmful in contact with skin. May cause damage to organs through prolonged or repeated exposure. May cause drowsiness and dizziness. Causes skin irritation. Possible reproductive hazard. Dangerous for the environment if discharged into watercourses.
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### GHS-classification

<b>Physical hazards</b>	Aerosols	Category 1
<b>Health hazards</b>	Acute toxicity, dermal	Category 5
	Skin corrosion/irritation	Category 2
	Reproductive toxicity	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2
	Aspiration hazard	Category 1
<b>Environmental hazards</b>	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2
<b>Other hazards which do not result in classification</b>	Not classified.	

### Label elements

#### Pictograms



### GHS-labeling

**Signal word** Danger

<b>Hazard statement</b>	Extremely flammable aerosol. Pressurized container: May burst if heated. May be fatal if swallowed and enters airways. May be harmful in contact with skin. Causes skin irritation. May cause drowsiness or dizziness. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.
<b>Precautionary statement</b>	
<b>Prevention</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not spray on an open flame or other ignition source. Do not breathe mist or vapor. Use only outdoors or in a well-ventilated area. Wear protective gloves. Wash thoroughly after handling. Avoid release to the environment.
<b>Response</b>	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. IF exposed or concerned: Get medical advice/attention. Collect spillage.
<b>Storage</b>	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Physical and chemical hazards</b>	Extremely flammable aerosol. The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Health hazards</b>	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia. May be harmful in contact with skin. May cause damage to organs through prolonged or repeated exposure by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful. Causes skin irritation. Direct contact with eyes may cause temporary irritation.
<b>Environmental hazards</b>	Toxic to aquatic life with long lasting effects.

### 3. Composition/information on ingredients

Substance/mixture	Mixture	
Chemical name	Concentration (%)	CAS Number
2-methylpentane	20 - 30	107-83-5
isohexane	20 - 30	73513-42-5
naphtha (petroleum), hydrotreated light	20 - 30	64742-49-0
2,2-dimethylbutane	5 - 10	75-83-2
2,3-dimethylbutane	5 - 10	79-29-8
3-methylpentane	5 - 10	96-14-0
carbon dioxide	5 - 10	124-38-9
n-hexane	3 - 5	110-54-3

### 4. First aid measures

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
<b>Skin contact</b>	Remove contaminated clothing. Wash with plenty of soap and water. Get medical advice/attention if you feel unwell. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Most important symptoms and health effects</b>	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects.
<b>Expected acute symptoms and delayed symptoms</b>	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects.
<b>Personal protection for first-aid responders</b>	IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.
<b>Notes to physician</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

## 5. Fire-fighting measures

<b>Extinguishing media</b>	Foam. Powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Extinguishing media to avoid</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards</b>	Contents under pressure. Pressurized container may rupture when exposed to heat or flame. During fire, gases hazardous to health may be formed.
<b>Special fire fighting procedures</b>	Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.
<b>Protection of fire-fighters</b>	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
<b>General fire hazards</b>	Extremely flammable aerosol.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials. In the event of fire and/or explosion do not breathe fumes.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**For emergency responders** Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

**Environmental precautions** Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

**Clean-up methods and materials and containment measures** Stop leak if you can do so without risk. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent product from entering drains. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

**Prevention of secondary hazards** Not available.

## 7. Handling and storage

**Handling** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

**Storage** Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Exposure limits

**China OELs. Occupational Exposure Limits for Hazardous Agents in the Workplace, Chemical Hazardous Agents (GBZ 2.1-2007)**

Components	Type	Value
carbon dioxide (CAS 124-38-9)	PC-STEL	18000 mg/m <sup>3</sup>
	PC-TWA	9000 mg/m <sup>3</sup>
n-hexane (CAS 110-54-3)	PC-STEL	180 mg/m <sup>3</sup>
	PC-TWA	100 mg/m <sup>3</sup>

**Biological limit values****China. Biological limit values for occupational exposure (WS/T 110 to 115, 239 to 243, and 264 to 267)**

Components	Value	Determinant	Specimen	Sampling Time
n-hexane (CAS 110-54-3)	4 mg/l	2,5-Hexanedione	Urine	*
	35 mmol/l	2,5-Hexanedione	Urine	*

\* - For sampling details, please see the source document.

**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
n-hexane (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedione, without hydrolysis	Urine	*

\* - For sampling details, please see the source document.

**Exposure guidelines****China OELs. Occupational Exposure Limits for Hazardous Agents in the Workplace, Chemical Hazardous Agents (GBZ 2.1-2007): Skin designation**

N-HEXANE (CAS 110-54-3)

Can be absorbed through the skin.

**Engineering measures**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower should be available when handling this product.

**Personal protective equipment****Respiratory protection**

If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

**Hand protection**

Wear protective gloves such as: Nitrile. Polyvinyl chloride (PVC). Viton/butyl.

**Eye protection**

Wear safety glasses with side shields (or goggles).

**Skin and body protection**

Wear appropriate chemical resistant clothing.

**Hygiene measures**

Observe any medical surveillance requirements.

**9. Physical and chemical properties****Appearance****Physical state**

Liquid.

**Form**

Aerosol.

**Color**

Colorless.

**Odor**

Solvent.

**pH**

Not available.

**Melting point/freezing point**

Not available.

**Boiling point, initial boiling point, and boiling range**

123 °F (50.6 °C) estimated

**Flash point**

&lt; 0 °F (&lt; -17.8 °C) Tag Closed Cup

**Flammability limit - lower (%)**

1.1 % estimated

**Flammability limit - upper (%)**

7.3 % estimated

**Explosive limit - lower (%)**

1.1 % estimated

**Explosive limit - upper (%)**

7.3 % estimated

**Vapor pressure**

3200 hPa estimated

**Vapor density**

&gt; 1 (air = 1)

**Relative density**

0.7 estimated

**Density**

5.9 lbs/gal estimated

**Solubility(ies)****Solubility (water)**

Not available.

**Partition coefficient (n-octanol/water)**

Not available.

<b>Auto-ignition temperature</b>	489.2 °F (254 °C) estimated
<b>Decomposition temperature</b>	Not available.
<b>Evaporation rate</b>	Very fast.
<b>Other data</b>	
<b>Percent volatile</b>	95 % estimated

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Heat, flames and sparks. Contact with incompatible materials.
<b>Incompatible materials</b>	Acids. Strong oxidizing agents. Aluminum. Alkalies.
<b>Hazardous decomposition products</b>	Carbon oxides.

## 11. Toxicological information

**Acute toxicity** May be fatal if swallowed and enters airways. May be harmful in contact with skin.

Components	Species	Test Results
naphtha (petroleum), hydrotreated light (CAS 64742-49-0)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	> 2000 mg/kg
<b>Inhalation</b>		
LC50	Rat	61 mg/l, 4 Hours
<b>Oral</b>		
LD50	Rat	> 5000 mg/kg
n-hexane (CAS 110-54-3)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	> 1300 mg/kg
<b>Inhalation</b>		
LC50	Rat	< 48000 ppm, 4 Hours
<b>Oral</b>		
LD50	Rat	15840 mg/kg

\* Estimates for product may be based on additional component data not shown.

<b>Routes of exposure</b>	Inhalation. Ingestion. Skin contact. Eye contact.
<b>Symptoms</b>	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Skin irritation. May cause redness and pain.
<b>Skin corrosion/irritation</b>	Causes skin irritation.
<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>Toxic to reproduction</b>	Suspected of damaging fertility or the unborn child.
<b>Specific target organ toxicity following single exposure</b>	May cause drowsiness and dizziness.
<b>Specific target organ toxicity following repeated exposure</b>	May cause damage to organs through prolonged or repeated exposure.
<b>Aspiration hazard</b>	May be fatal if swallowed and enters airways.

**Chronic effects** May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful.

## 12. Ecological information

### Ecotoxicological data

Components	Species		Test Results
2-methylpentane (CAS 107-83-5)			
<b>Aquatic</b>			
<i>Acute</i>			
Crustacea	EC50	Daphnia	1 - 10 mg/l, 48 hours
Fish	LC50	Fish	1 - 10 mg/l, 96 hours
naphtha (petroleum), hydrotreated light (CAS 64742-49-0)			
<b>Aquatic</b>			
<i>Acute</i>			
Crustacea	EC50	Daphnia	1 - 10 mg/l, 48 hours
Fish	LC50	Fish	1 - 10 mg/l, 96 hours
n-hexane (CAS 110-54-3)			
<b>Aquatic</b>			
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> )	2.101 - 2.981 mg/l, 96 hours

\* Estimates for product may be based on additional component data not shown.

**Ecotoxicity** Toxic to aquatic life with long lasting effects.  
**Persistence and degradability** No data is available on the degradability of this product.  
**Bioaccumulation**

#### Bioaccumulative potential

##### Bioconcentration factor

naphtha (petroleum), hydrotreated light 10 - 25000

##### Octanol/water partition coefficient log Kow

2,2-dimethylbutane 3.82  
 2,3-dimethylbutane 3.42  
 2-methylpentane 3.74  
 3-methylpentane 3.6  
 n-hexane 3.9

**Mobility in soil** No data available for this product.

**Other hazardous effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

**Residual waste** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

**Local disposal regulations** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

## 14. Transport information

### CNDG

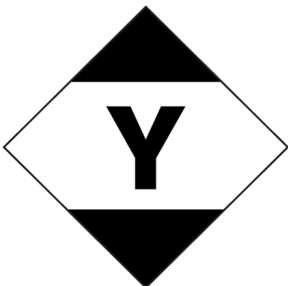
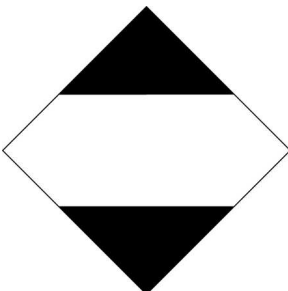
**UN number** UN1950  
**UN proper shipping name** Aerosols, flammable, (each not exceeding 1 L capacity)  
**Transport hazard class(es)**  
**Class** 2.1  
**Subsidiary risk** -  
**Label(s)** 2.1  
**Packing group** -  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**IATA**

<b>UN number</b>	UN1950
<b>UN proper shipping name</b>	Aerosols, flammable, Limited Quantity
<b>Transport hazard class(es)</b>	
<b>Class</b>	2.1
<b>Subsidiary risk</b>	-
<b>Packing group</b>	Not applicable.
<b>Environmental hazards</b>	No.
<b>ERG Code</b>	10L
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Other information</b>	
<b>Passenger and cargo aircraft</b>	Allowed with restrictions.
<b>Cargo aircraft only</b>	Allowed with restrictions.

**IMDG**

<b>UN number</b>	UN1950
<b>UN proper shipping name</b>	AEROSOLS, Limited Quantity
<b>Transport hazard class(es)</b>	
<b>Class</b>	2
<b>Subsidiary risk</b>	-
<b>Packing group</b>	Not applicable.
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No.
<b>EmS</b>	Not available.
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not established.

**CNDG****IATA****IMDG**

## 15. Regulatory information

### Inventory of Existing Chemical Substances in China

Country(s) or region	Inventory name	On inventory (yes/no)*
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

### Applicable regulations

This safety data sheet conforms to the following laws, regulations and standards:

Regulations on the Control over Safety of Dangerous Chemicals

Regulations on Labor Protection in Workplaces Where Toxic Products Are Used

Measures for the Safe Use of Chemicals in Workplaces

Safety Data Sheet for Chemical Products - Content and Order of Sections (GB/T 16483-2008)

General Rules for Preparation of Precautionary Labels for Chemicals (GB15258-2009)

Packing Symbol of Dangerous Goods(GB190-2009)

Packing - Pictorial Marking for Handling of Goods (GB/T191-2009)

### General Rule For Classification and Hazard Communication of Chemicals (GB 13690-2009) and Catalog of Hazardous Chemicals

2,2-dimethylbutane (CAS 75-83-2)

2,3-dimethylbutane (CAS 79-29-8)

2-methylpentane (CAS 107-83-5)

3-methylpentane (CAS 96-14-0)

carbon dioxide (CAS 124-38-9)

naphtha (petroleum), hydrotreated light (CAS 64742-49-0)

n-hexane (CAS 110-54-3)

### Occupational exposure limits for hazardous agents in the workplace (GBZ 2.1-2007)

carbon dioxide (CAS 124-38-9)

n-hexane (CAS 110-54-3)

### Restricted Import/Export Toxic Chemical List (MEP and GCA Announcement No. 2008-66, Dec. 1, 2008, amended through MEP and Customs Notice No. 2013-85, December 30, 2013)

Not regulated.

### Identification of Major Hazard Installations for Hazardous Chemicals (GB18218-2009)

n-hexane (CAS 110-54-3)

### List Of Priority Management of Hazardous Chemicals

naphtha (petroleum), hydrotreated light (CAS 64742-49-0)

### Classification and code of dangerous goods (GB 6944-2012)

Regulated.

### List of Dangerous Goods (GB 12268-2005)

Regulated.

### The Principle of Classification of Transport Packaging Groups of Dangerous Goods (GB/T15098-2008)

Regulated.

### General Specifications for Transport Packages of Dangerous Goods (GB 12463-2009)

Regulated.

### Regulations on Road Transport of Dangerous Goods

Regulated.

### Regulations on Rail Road Transport of Dangerous Goods

Regulated.

### UN Recommendations on the Transport of Dangerous Goods (UN RTDG)

Regulated.

## 16. Other information

### References

EPA: AQUIRE database

NLM: Hazardous Substances Data Base

US. IARC Monographs on Occupational Exposures to Chemical Agents

### Disclaimer

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC's knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries Trading (Shanghai) Co., Ltd..

### Revision Information

This document has undergone significant changes and should be reviewed in its entirety.