# *Food Grade Oil C-7*

## 1. PRODUCT AND COMPANY IDENTIFICATION

### 1. Product identifier

Trade name : Food Grade Oil C-7

Synonyms: Synthetic Lubricant Formulation

Product Use Description: Lubricant

### Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Lubricant

Recommended restrictions on use : Restricted to professional users.

### Details of the supplier of the safety data sheet

Company : Manufacturer
KOBELCO COMPRESSORS CORPORATION

Address : ON Building, 9-12, Kita-Shinagawa 5-chome, Shinagawa-ku, Tokyo, 141-8688, Japan

### Emergency telephone number

telephone : +81-3-5739-5341

## 2. HAZARDS IDENTIFICATION

**GHS Classification**

Short-term (acute) aquatic hazard : Category 3

Long-term (chronic) aquatic hazard : Category 3

**GHS label elements**

Hazard pictograms : None
Signal word : None
Hazard statements : H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P273 Avoid release to the environment.
**Disposal:**
P501 Dispose of contents/ container to an approved waste disposal plant.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

**Hazardous components**

| Chemical name | CAS-No. | Concentration (% w/w) | ENCS/ISHL number |
|---|---|---|---|
| 2,6-di-tert-butyl-p-cresol | 128-37-0 | >= 1 - < 2,5 | 3-540, 9-1805 |
| N-1-naphthylaniline | 90-30-2 | >= 0,25 - < 1 | 4-329 |

For explanation of abbreviations see section 16.

## 4. FIRST AID MEASURES

General advice : No hazards which require special first aid measures.

If inhaled : Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion.
If symptoms persist, call a physician.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.

| | | |
|---|---|---|
| In case of eye contact | : | Flush eyes with water as a precaution.<br>Remove contact lenses.<br>Protect unharmed eye.<br>Keep eye wide open while rinsing.<br>If eye irritation persists, consult a specialist. |
| If swallowed | : | Clean mouth with water and drink afterwards plenty of water.<br>Do not give milk or alcoholic beverages.<br>Never give anything by mouth to an unconscious person.<br>If symptoms persist, call a physician. |
| Most important symptoms and effects, both acute and delayed | : | None known. |
| Notes to physician | : | For specialist advice physicians should contact the Poisons Information Service. |

## 5. FIREFIGHTING MEASURES

| | | |
|---|---|---|
| Suitable extinguishing media | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Specific hazards during firefighting | : | Do not allow run-off from fire fighting to enter drains or water courses. |
| Further information | : | Collect contaminated fire extinguishing water separately. This must not be discharged into drains.<br>Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. |
| Special protective equipment for firefighters | : | In the event of fire, wear self-contained breathing apparatus. |

## 6. ACCIDENTAL RELEASE MEASURES

| | | |
|---|---|---|
| Personal precautions, protective equipment and emergency procedures | : | Use personal protective equipment. |
| Environmental precautions | : | If the product contaminates rivers and lakes or drains inform respective authorities. |
| Methods and materials for containment and cleaning up | : | Wipe up with absorbent material (e.g. cloth, fleece).<br>Keep in suitable, closed containers for disposal. |

## 7. HANDLING AND STORAGE

**Handling**

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations.

Avoidance of contact : Strong acids and oxidizing agents

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
Wash hands before breaks and at the end of workday.

**Storage**

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Threshold limit value and permissible exposure limits for each component in the work environment**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|---|---|---|---|---|
| 2,6-di-tert-butyl-p-cresol | 128-37-0 | TWA (Inhalable fraction and vapor) | 2 mg/m3 | ACGIH |
| N-1-naphthylaniline | 90-30-2 | TWA | 10 ml/m3 | ACGIH |
| | | TWA | 10 ml/m3 | ACGIH |

**Engineering measures** : Effective exhaust ventilation system
Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal protective equipment**

Respiratory protection : In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

Hand protection

Remarks : Polyvinyl alcohol or nitrile- butyl-rubber gloves Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Before removing gloves clean them with soap and water.

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles

| | | |
|---|---|---|
| Skin and body protection | : | Impervious clothing<br>Choose body protection according to the amount and concentration of the dangerous substance at the work place. |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|---|---|
| Appearance | : | liquid |
| Colour | : | clear |
| Odour | : | characteristic |
| Odour Threshold | : | No data available |
| pH | : | Not applicable |
| | : | No data available |
| Flash point | : | 238 °C |
| Vapour pressure | : | No data available |
| Density | : | 0,842 g/cm3 (15 °C) |
| Solubility(ies) | | |
| Solubility in other solvents | : | No data available |
| Viscosity | | |
| Viscosity, dynamic | : | 9,5 - 74 mPa.s (40 - 100 °C)<br>Method: ASTM D 445 |
| Viscosity, kinematic | : | 68,3 mm2/s (40 °C) |
| Oxidizing potential | : | No information available. |

## 10. STABILITY AND REACTIVITY

| | | |
|---|---|---|
| Reactivity | : | Stable under recommended storage conditions. |
| Chemical stability | : | No decomposition if stored and applied as directed. |
| Possibility of hazardous reactions | : | No decomposition if used as directed. |
| Conditions to avoid | : | Exposure to moisture<br>Contamination |
| Incompatible materials | : | Strong acids and oxidizing agents |
| Hazardous decomposition products | : | Nitrogen oxides (NOx)<br>Carbon oxides |

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

**Components:**

**2,6-di-tert-butyl-p-cresol:**

Acute oral toxicity : LD50 (Rat, male and female): > 2.930 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Acute dermal toxicity : LD50 (Rat, male and female): > 2.000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

**N-1-naphthylaniline:**

Acute oral toxicity : LD50 (Rat): 1.625 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): > 5.000 mg/kg

**Skin corrosion/irritation**

**Product:**

Remarks: According to the classification criteria of the European Union, the product is not considered as being a skin irritant.

**Components:**

**2,6-di-tert-butyl-p-cresol:**

Species: Rabbit
Result: No skin irritation

**N-1-naphthylaniline:**

Species: Rabbit
Method: Draize Test
Result: No skin irritation

**Serious eye damage/eye irritation**

**Product:**

Remarks: According to the classification criteria of the European Union, the product is not considered as being an eye irritant.

**Components:**

**2,6-di-tert-butyl-p-cresol:**

Species: Rabbit
Result: No eye irritation

**N-1-naphthylaniline:**

Species: Rabbit
Method: OECD Test Guideline 405
Result: No eye irritation

**Respiratory or skin sensitisation**

**Components:**

**2,6-di-tert-butyl-p-cresol:**

Species: Guinea pig
Assessment: Did not cause sensitisation on laboratory animals.

**N-1-naphthylaniline:**

Test Type: Maximisation Test
Species: Guinea pig
Result: Probability or evidence of low to moderate skin sensitisation rate in humans

**Germ cell mutagenicity**

**Components:**

**2,6-di-tert-butyl-p-cresol:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: Ames test<br>Metabolic activation: with and without metabolic activation<br>Result: negative |
| | : | Test Type: Chromosome aberration test in vitro<br>Metabolic activation: with and without metabolic activation<br>Result: negative |
| | : | Test Type: unscheduled DNA synthesis assay<br>Result: negative |
| | : | Test Type: In vitro mammalian cell gene mutation test<br>Result: negative |
| Genotoxicity in vivo | : | Test Type: In vivo micronucleus test<br>Species: Mouse (male and female)<br>Cell type: Bone marrow<br>Method: Mutagenicity (micronucleus test)<br>Result: negative<br><br>Test Type: in vivo assay<br>Species: Rat (male)<br>Cell type: Bone marrow<br>Application Route: Oral<br>Method: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)<br>Result: negative |
| Germ cell mutagenicity - Assessment | : | Animal testing did not show any mutagenic effects. |

**N-1-naphthylaniline:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: Ames test<br>Metabolic activation: with and without metabolic activation<br>Result: negative |
| | : | Test Type: Chinese Hamster Ovary (CHO)<br>Metabolic activation: with and without metabolic activation<br>Result: negative |
| Genotoxicity in vivo | : | Test Type: in vivo assay<br>Species: Mouse (male)<br>Result: negative |
| Germ cell mutagenicity - Assessment | : | Animal testing did not show any mutagenic effects., Tests on bacterial or mammalian cell cultures did not show mutagenic effects. |

**Carcinogenicity**

**Components:**

**N-1-naphthylaniline:**

| | | |
|---|---|---|
| Carcinogenicity - Assessment | : | Animal testing did not show any carcinogenic effects. |

**Reproductive toxicity**

**Components:**

**2,6-di-tert-butyl-p-cresol:**

| | | |
|---|---|---|
| Reproductive toxicity - Assessment | : | No toxicity to reproduction<br>No effects on or via lactation |

**STOT - repeated exposure**

**Components:**

**2,6-di-tert-butyl-p-cresol:**

Exposure routes: Oral
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**N-1-naphthylaniline:**

Exposure routes: Oral
Target Organs: Liver, Kidney
Assessment: May cause damage to organs through prolonged or repeated exposure.

**Aspiration toxicity**

**Product:**

No aspiration toxicity classification

**Further information**

**Product:**

Remarks: No data available

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Product:**

| | | |
|---|---|---|
| Toxicity to fish | : | Remarks: No data available |
| Toxicity to daphnia and other aquatic invertebrates | : | Remarks: No data available |

**Components:**

**2,6-di-tert-butyl-p-cresol:**

| | | |
|---|---|---|
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC: 0,07 mg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea)<br>Analytical monitoring: yes<br>GLP: yes |

**N-1-naphthylaniline:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Oncorhynchus mykiss (rainbow trout)): 0,44 mg/l<br>Exposure time: 96 h<br>Test Type: semi-static test<br>Analytical monitoring: yes |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 0,68 mg/l<br>Exposure time: 48 h<br>Test Type: semi-static test<br>Analytical monitoring: yes |
| Toxicity to microorganisms | : | EC50 (Protozoa): 2 mg/l<br>Exposure time: 48 h<br><br>EC50 (Bacteria): > 10.000 mg/l<br>Exposure time: 3 h |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC: 0,02 mg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea)<br>Analytical monitoring: yes |

**Persistence and degradability**

**Product:**

Biodegradability : Result: No data available

**Components:**

**2,6-di-tert-butyl-p-cresol:**

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 50 mg/l
Result: According to the results of tests of biodegradability this product is not readily biodegradable.
Biodegradation: 4,5 %
Exposure time: 28 d

**N-1-naphthylaniline:**

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 100 mg/l
Result: According to the results of tests of biodegradability this product is not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301
GLP: yes

**Bioaccumulative potential**

**Product:**

Bioaccumulation : Remarks: No data available

**Components:**

**2,6-di-tert-butyl-p-cresol:**

Bioaccumulation : Species: Cyprinus carpio (Carp)
Exposure time: 56 d
Temperature: 25 °C
Concentration: 0,05 mg/l
Bioconcentration factor (BCF): 230 - 2.500

Partition coefficient: n-octanol/water : log Pow: 5,1
GLP: yes

log Pow: 4,2

**N-1-naphthylaniline:**

Bioaccumulation : Species: Cyprinus carpio (Carp)
Exposure time: 56 d
Temperature: 25 °C
Concentration: 0,1 mg/l
Bioconcentration factor (BCF): 427 - 2.730

Partition coefficient: n-octanol/water : log Pow: 4,28

**Mobility in soil**

**Product:**

Mobility : Remarks: No data available

**Other adverse effects**

**Product:**

Results of PBT and vPvB assessment : This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

## 14. TRANSPORT INFORMATION

**International Regulations**

**UNRTDG**
Not regulated as a dangerous good

**IATA-DGR**
Not regulated as a dangerous good

**IMDG-Code**
Not regulated as a dangerous good

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**National Regulations**

Refer to section 15 for specific national regulation.

## 15. REGULATORY INFORMATION

## SECTION 15. REGULATORY INFORMATION

**Related Regulations**

**Fire Service Law**

Classification: Group 4
Flammable liquids (Type 4 petroleums)

Designated Quantity: 6000 litre
Hazard rank: Hazardous rank III
Precautionary statements: Keep away from fire

**Chemical Substance Control Law**

Priority Assessment Chemical Substance

| Chemical name | Number |
|---|---|
| 2,6-Di-tert-butyl-4-methylphenol | 64 |

**Industrial Safety and Health Law**

**Prohibited Substances**

Not applicable

**MSDS Table 3-1**

Not applicable

**Substances Prevented From Impairment of Health**

Not applicable

**Circular concerning Information on Chemicals having Mutagenicity - Annex 2: Information on Existing Chemicals having Mutagenicity**

Not applicable

**Circular concerning Information on Chemicals having Mutagenicity - Annex 1: Information on Notified Substances having Mutagenicity**

Not applicable

**MSDS Table 9**

Article 57-2 (Enforcement Order Table 9)

| Chemical name | Number | Concentration (%) |
|---|---|---|
| 2,6-Di-tert-butyl-4-cresol | 262 | >=1 - <10 |

**Hazardous Substances Subject to Labelling Requirements**

Article 57 (Enforcement Order Article 18)

| Chemical name | Number |
|---|---|
| 2,6-Di-tert-butyl-4-cresol | 262 |

**Ordinance on Prevention of Hazards Due to Specified Chemical Substances**

Not applicable

**Prevention of Lead**

Not applicable

**Prevention of Tetra Alkyl Lead**

Not applicable

**Ordinance on Prevention of Organic Solvent Poisoning**

Not applicable

**Enforcement Order of the Industrial Safety and Health Law - Attached table 1 (Dangerous Substances)**

Not applicable

**Poisonous and Deleterious Substances Control Law**

Not applicable

**Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof**

**Class 1 Substances**

| Chemical name | Number | Concentration (%) |
|---|---|---|
| 2,6-Di-tert-butyl-4-cresol | 207 | 1,0 |

Narcotic or Psychotropic Raw Material (Export / Import Permission) : Not applicable

Specific Narcotic or Psychotropic Raw Material (Export / Import permission) : Not applicable

**Explosive Control Law**

Not applicable

**Vessel Safety Law**

Not regulated as a dangerous good

**Aviation Law**

Not regulated as a dangerous good

**Maritime pollution prevention law Japan**

Bulk transportation : Noxious liquid substance(Category Z)

Pack transportation : Not classified as marine pollutant

**Waste Disposal and Public Cleansing Law**

Industrial waste

Please note that Section 3 of this document lists only the hazardous components required by the specific country or region hazard communication regulations. The chemical identifiers listed in Section 3 are used globally for hazard communication purposes and may not reflect those used for chemical inventory coverage in a particular country or region. The chemical inventory information given in Section 15 of this document applies to the product as a whole and should be used when evaluating inventory compliance.**The components of this product are reported in the following inventories:**

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

NZIoC : Not in compliance with the inventory

| | | |
|---|---|---|
| ENCS | : | On the inventory, or in compliance with the inventory |
| KECI | : | On the inventory, or in compliance with the inventory |
| PICCS | : | On the inventory, or in compliance with the inventory |
| IECSC | : | On the inventory, or in compliance with the inventory |
| TCSI | : | On the inventory, or in compliance with the inventory |
| US.TSCA | : | All substances listed as active on the TSCA inventory |

## 16. OTHER INFORMATION

**Full text of other abbreviations**

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Date format : yyyy/mm/dd

# *Food Grade Oil C-7*

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.

JP / EN