

3% Trichloroacetic Acid in Dichloromethane**BR605-4**

Version 1.3

Issuing date 09/28/2017

Revision Date 10/08/2020

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1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**Product information**

Trade name : 3% Trichloroacetic Acid in Dichloromethane

Number : 000000011349

Recommended use of the chemical and restrictions on use : Laboratory Use

Manufacturer or supplier's details : Honeywell Specialty Chemicals Seelze GmbH
Wunstorfer Straße 40
Seelze, 30926

For further information, please contact: : 1-800-368-0050
+1-231-726-3171
(Monday-Friday, 9:00am-5:00pm)

In case of emergency call : **Medical: 1-800-498-5701 or +1-303-389-1414**
Transportation (CHEMTREC): 1-800-424-9300 or +1-703-527-3887
In Japan: +(81)-345209637
: (24 hours/day, 7 days/week)

2. HAZARDS IDENTIFICATION**Classification of the substance or mixture**

Classification of the substance or mixture : Skin irritation, Category 2
Serious eye damage, Category 1
Carcinogenicity, Category 2
Specific target organ toxicity - single exposure, Category 3
Short-term (acute) aquatic hazard, Category 2
Long-term (chronic) aquatic hazard, Category 2

GHS Label elements, including precautionary statements

Symbol(s)

:



Signal word

: Danger

Hazard statements

: Causes skin irritation.

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Causes serious eye damage.
May cause drowsiness or dizziness.
Suspected of causing cancer.
Toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.

Response:
IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove victim to fresh air and keep at rest in a position 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/ doctor.
If skin irritation occurs: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.
Collect spillage.

Storage:
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Disposal:
Dispose of contents/ container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Mixture

Chemical name	CAS-No.	Concentration
Dichloromethane	75-09-2	97.00 %
Dichloromethane		
Trichloroacetic acid	76-03-9	3.00 %
Trichloroacetic acid		

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Note: Organic Solvents Class 2

Note: Substances Subject to be Notified Names

Note: Mutagens, Existing Chemicals

Note: Type 2 Monitoring Chemicals (Designated substances)

Note: Substances Prevented From Impairment of Health

Note: ISHL Article 38-3 Specified Chemical Substances

Note: Type III Monitoring Chemicals

4. FIRST AID MEASURES

- Inhalation : Call a physician immediately.
Remove to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.
Use oxygen as required, provided a qualified operator is present.
- Skin contact : Wash off immediately with plenty of water for at least 15 minutes.
Take off contaminated clothing and shoes immediately.
Wash contaminated clothing before re-use.
Call a physician immediately.
- Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Call a physician immediately.
- Ingestion : Do not induce vomiting without medical advice.
Never give anything by mouth to an unconscious person.
Call a physician immediately.
- Notes to physician : Treat symptomatically.

5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Dry chemical
Carbon dioxide (CO₂)
Foam
Cool closed containers exposed to fire with water spray.
- Specific hazards during firefighting : This product is not flammable at ambient temperatures and atmospheric pressure.
In case of fire hazardous decomposition products may be produced such as:
Gaseous hydrogen chloride (HCl).
Phosgene
Chlorine (Cl₂)

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Carbon monoxide
Carbon dioxide (CO₂)

Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Wear personal protective equipment.
Immediately evacuate personnel to safe areas.
Keep people away from and upwind of spill/leak.
Ensure adequate ventilation.
Remove all sources of ignition.
Isolate the affected area. Confine entry into the affected area to those persons properly protected (see Section 8 of MSDS).
Do not swallow.
Do not breathe vapours or spray mist.
Do not get in eyes, on skin, or on clothing.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.
Do not let product enter drains.
Discharge into the environment must be avoided.
Do not flush into surface water or sanitary sewer system.
Do not allow run-off from fire fighting to enter drains or water courses.
- Methods and materials for containment and cleaning up : Ventilate the area.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Shovel into suitable container for disposal.
Dispose of absorbed material in accordance with the regulations.

7. HANDLING AND STORAGE**Handling**

- Precautions for safe handling : Wear personal protective equipment.
Use only in well-ventilated areas.
Keep container tightly closed.
Do not swallow.
Do not breathe vapours or spray mist.
Do not get in eyes, on skin, or on clothing.
- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
Keep product and empty container away from heat and sources of ignition.
Fire or intense heat may cause violent rupture of packages.

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Storage

Conditions for safe storage, including any incompatibilities : Keep containers tightly closed in a dry, cool and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep away from heat and sources of ignition.
Keep away from direct sunlight.
Store away from incompatible substances.
Container hazardous when empty.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Update	Basis
Dichloromethane Dichloromethane	75-09-2	TL : Threshold limits	(50 ppm)	04 2009	ISHL:Industrial Safety and Health Law OEL
		TWA : Time weighted average	170 mg/m3 (50 ppm)	04 2007	Japan Society for Occupational Health:Japan Society for Occupational Health allowable concentration recommendation value
		TLV-C : Ceiling Limit Value	340 mg/m3 (100 ppm)	04 2007	Japan Society for Occupational Health:Japan Society for Occupational Health allowable concentration recommendation value

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		SKIN_DES : Skin designation:	Can be absorbed through the skin.	04 2007	Japan Society for Occupational Health: Japan Society for Occupational Health allowable concentration recommendatio n value
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Appropriate engineering controls

Use with local exhaust ventilation.

Prevent vapour buildup by providing adequate ventilation during and after use.

Individual protection measures, such as personal protective equipment

- Respiratory protection : In case of insufficient ventilation wear suitable respiratory equipment.
For rescue and maintenance work in storage tanks use self-contained breathing apparatus.
Use NIOSH approved respiratory protection.
- Hand protection : Solvent-resistant gloves
Gloves must be inspected prior to use.
Replace when worn.
- Eye protection : Do not wear contact lenses.
Wear as appropriate:
Safety glasses with side-shields
If splashes are likely to occur, wear:
Goggles or face shield, giving complete protection to eyes
- Skin and body protection : Wear as appropriate:
Solvent-resistant apron
Solvent-resistant gloves
If splashes are likely to occur, wear:
Protective suit
- Hygiene measures : When using, do not eat, drink or smoke.
Wash hands before breaks and immediately after handling the product.
Keep working clothes separately.
Remove and wash contaminated clothing before re-use.
Do not swallow.
Do not breathe vapours or spray mist.
Do not get in eyes, on skin, or on clothing.

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This material has an established AIHA ERPG exposure limit. The current list of ERPG exposure limits can be found at http://www.aiha.org/insideaiha/GuidelineDevelopment/ERPG/Documents/2011erpgweelhandbook_table-only.pdf.

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : liquid, clear

Colour : colourless

Odour : mild sweet

Melting point/range : -95 °C

Boiling point/boiling range : 40 °C

Flash point : Note: does not flash, closed cup

Lower explosion limit : 12 %(V)
Note: The physical data is that of the main component.

Upper explosion limit : 19 %(V)
Note: The physical data is that of the main component.

Vapour pressure : 466 hPa
at 20 °C(68 °F)

Vapour density : 2.9
Note: (Air = 1.0)

Density : 1.33 g/cm³ at 20 °C

Water solubility : 13.2 g/l at 25 °C

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Ignition temperature : 556 °C
Method: The physical data is that of the main component.

10. STABILITY AND REACTIVITY

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Hazardous polymerisation does not occur.

Conditions to avoid : Heat, flames and sparks.
Protect from extreme heat and cold.
Keep away from direct sunlight.

Incompatible materials to avoid : Oxidizing agents
Strong acids and strong bases
Metals
May attack many plastics, rubbers and coatings.

Hazardous decomposition products : In case of fire hazardous decomposition products may be produced such as:
Phosgene
Hydrogen chloride gas
Carbon monoxide
Carbon dioxide (CO₂)
Chlorine

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : Acute toxicity estimate: 83,333.33 mg/kg
Method: Calculation method

Acute inhalation toxicity
Trichloroacetic acid : LC50: > 4800 ppm
Exposure time: 4 h
Species: Rat

Acute dermal toxicity : Acute toxicity estimate: 2,500 mg/kg

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Method: Calculation method

Skin irritation

Dichloromethane

: Species: Rabbit

Result: Moderate skin irritation

Trichloroacetic acid

: Species: Rabbit

Result: Causes burns.

Classification: Corrosive

Eye irritation

Dichloromethane

: Species: Rabbit

Result: Moderate eye irritation

Dichloromethane

: Test Method: Ames test

Result: positive

Trichloroacetic acid

: Note: In vitro tests did not show mutagenic effects

: Test Method: In vitro gene mutation study in mammalian cells
Cell type: Chinese Hamster Ovary Cells
Result: positive

: Test Method: Unscheduled DNA synthesis

Result: positive

Note: Liver cells Mouse

Further information

Dichloromethane

: Note:

Confirmed animal carcinogen with unknown relevance to humans.

Trichloroacetic acid

: Note:

Confirmed animal carcinogen with unknown relevance to humans.

12. ECOLOGICAL INFORMATION

Toxicity to fish

Dichloromethane

: static test

LC50: 310 mg/l

Exposure time: 96 h

Species: Pimephales promelas (fathead minnow)

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flow-through test
LC50: 193 mg/l
Exposure time: 96 h
Species: Pimephales promelas (fathead minnow)

flow-through test
LC50: 10.95 mg/l
Exposure time: 96 h
Species: Oncorhynchus mykiss (rainbow trout)

static test
LC50: 220 mg/l
Exposure time: 96 h
Species: Lepomis macrochirus (Bluegill sunfish)

Trichloroacetic acid : LC50: 2,000 mg/l
Exposure time: 96 h
Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates

Dichloromethane : static test
EC50: 140 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)

Trichloroacetic acid : EC50: 2,000 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)

Toxicity to algae

Trichloroacetic acid : EC50: 0.3 mg/l
Exposure time: 14 d
Species: Chlorella pyrenoidosa (aglae)

NOEC: 0.01 mg/l
Exposure time: 14 d
Species: Chlorella pyrenoidosa (aglae)

Toxicity to bacteria

Dichloromethane : EC50: 1,000 mg/l
Exposure time: 15 min
Species: Photobacterium phosphoreum

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13. DISPOSAL CONSIDERATIONS

Disposal methods : In accordance with local and national regulations.

14. TRANSPORT INFORMATION**ADR**

UN/ID No. : UN 2922
Description of the goods : CORROSIVE LIQUID, TOXIC, N.O.S.

(TRICHLOROACETIC ACID, DICHLOROMETHANE)

Class : 8
Packing group : II
Classification Code : CT1
Hazard Identification Number : 86
Labels : 8 (6.1)

IATA

UN/ID No. : UN 2922
Description of the goods : Corrosive liquid, toxic, n.o.s.
(Trichloroacetic acid, Dichloromethane)

Class : 8
Packing group : II
Labels : 8 (6.1)
Packing instruction (cargo aircraft) : 855
Packing instruction (passenger aircraft) : 851
Packing instruction (passenger aircraft) : Y840

IMDG

UN/ID No. : UN 2922
Description of the goods : CORROSIVE LIQUID, TOXIC, N.O.S.
(TRICHLOROACETIC ACID, DICHLOROMETHANE)

Class : 8
Packing group : II
Labels : 8 (6.1)
EmS Number 1 : F-A
EmS Number 2 : S-B

Marine pollutant : yes

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15. REGULATORY INFORMATION**National regulatory information**

Vessel Safety Law : Toxic and infectious substances (Article 2 and 3 of rules on shipping and storage of dangerous goods and its Attached Table 1)
JP VSL

Aviation Law : Toxic and infectious substances (Article 194 of The
JP AVL Enforcement Rules of Aviation Law and its Attached Table 1)

Fire Service Law : Not relevant

Japan. ISHL Class 2 : Listed
Designated Chemical Dichloromethane 75-09-2
Substances (ISHL
Enforcement Order, Table 3,
as amended)

Japan. ISHL Specified : Listed
Chemical Substances (ISHL Dichloromethane 75-09-2
Ordinance No. 39, Article 38-
3)

Japan. ISHL Hazardous : Listed
Substances Labeling Dichloromethane 75-09-2
Requirements (ISHL Art. 57, Trichloroacetic acid 76-03-9
Enforcement Order Art. 18,
Enforcement Rule Art. 30 &
31, as amended through 6
April 2018)

Japan. ISHL Mutagens, : Listed
Existing Chemicals List Dichloromethane 75-09-2

Japan. ISHL Class 2 Organic : Listed
Solvents Dichloromethane 75-09-2

Japan. ISHL Designated : Listed
Carcinogen Dichloromethane 75-09-2

Japan. SDS and Risk : Listed
Assessment Requirements Dichloromethane 75-09-2
(ISHL Art. 57-2 and 57-3, Trichloroacetic acid 76-03-9
Enforcement Order Art. 18-2,

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Enforcement Rule Art. 34-2
and 34-2-2), as amended

Poisonous and Deleterious
Substances Control Law

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

: Not relevant

: Class I Designated Chemical Substances
186, 282

Dichloromethane 75-09-2

Trichloroacetic acid 76-03-9

Other international regulations**Notification status**

US. Toxic Substances
Control Act

: On TSCA Inventory

Australia. Industrial Chemical
(Notification and
Assessment) Act

: On the inventory, or in compliance with the inventory

Canada. Canadian
Environmental Protection Act
(CEPA). Domestic
Substances List (DSL)

: All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List

: On the inventory, or in compliance with the inventory

Korea. Existing Chemicals
Inventory (KECI)

: On the inventory, or in compliance with the inventory

Philippines. The Toxic
Substances and Hazardous
and Nuclear Waste Control
Act

: On the inventory, or in compliance with the inventory

China. Inventory of Existing
Chemical Substances
(IECSC)

: On the inventory, or in compliance with the inventory

New Zealand. Inventory of
Chemicals (NZIoC), as
published by ERMA New
Zealand

: On the inventory, or in compliance with the inventory

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16. OTHER INFORMATION**Further information**

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. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group