

11/2017

Mod: DESI-IC

Production code: PN02150 (CROST)

Safety Data Sheet

CROST



Safety Data Sheet dated 28/3/2017, version 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Mixture identification:

Trade name: CROST

Trade code: MD02163

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use;

Liquid descaling for dishwasher pH sanitizing

Uses advised against:

Uses other than those recommended. Do not use with other product.

1.3. Details of the supplier of the safety data sheet

Company:

M.D. INTERNATIONAL s.r.l.

Via Metauro, 31/A

61033 Fermignano (PU)

Tel. 0722331112

Fax 0722332280

Competent person responsible for the safety data sheet:

simona@midor.it

1.4. Emergency telephone number

Tel. 0722331112

Fax 0722332280

Antipoison Center – Az. Osp. Papa Giovanni XXII - Bergamo - 800 883-300

Antipoison Center – Centro Nazionale di Informazione Tossicologica-PAVIA-0382 24444

Antipoison Center - Az. Osp. "Careggi" U.O. Tossicologia Medica - Firenze - 055 7947819

Antipoison Center – Osp. Pediatrico Bambino Gesù - Roma - 06 49978000

Antipoison Center – Policlinico "Umberto I" - Roma - 06 49918000

Antipoison Center – Policlinico "A. Gemelli" - Roma - 06 3054343

Antipoison Center – Az. Osp. "A. Cardarelli" - Napoli - 081 7472870

Antipoison Center – Osp. Pediatrico Bambino Gesù - Roma - 06 49978000

Antipoison Center – Osp. Niguarda Ca' Granda -Milano - 02 66101029

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

Danger, Skin Corr. 1A, Causes severe skin burns and eye damage.

Danger, Eye Dam. 1, Causes serious eye damage.

Warning, STOT SE 3, May cause respiratory irritation.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



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Danger

Hazard statements:

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

Precautionary statements:

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor/...

P312 Call a POISON CENTER/ doctor/if you feel unwell.

P321 Specific treatment (see ... On this label).

P363 Wash contaminated clothing before reuse.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

None

Contains

hydrochloric acid

phosphoric acid ,orthophosphoric acid

but-2-yne-1,4-diol; 2-butyne-1,4-diol: May produce an allergic reaction.

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Number	Classification
>= 12.5% - < 15%	hydrochloric acid ...	Index number: 017-002-01-X	 3.2/1B Skin Corr. 1B H314
		EC: 231-595-7	 3.8/3 STOT SE 3 H335
>= 7% - < 10%	phosphoric acid, orthophosphoric acid	Index number: 015-011-00-6	 2.16/1 Met. Corr. 1 H290
		CAS: 7664-38-2	 3.2/1B Skin Corr. 1B H314
		EC: 231-633-2	
>= 1% - < 3%	sulphamidic acid; sulphamic acid; sulfamic acid	Index number: 016-026-00-0	 3.3/2 Eye Irrit. 2 H319
		CAS: 5329-14-6	 3.2/2 Skin Irrit. 2 H315
		EC: 226-218-8	
			4.1/C3 Aquatic Chronic 3 H412

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>= 0.1% - < 0.25%	but-2-yne-1,4-diol; 2-butyne-1,4-diol	Index number: 603-076-00-9 CAS: 110-65-6 EC: 203-788-6	 3.2/1B Skin Corr. 1B H314  3.9/2 STOT RE 2 H373  3.4.2/1-1A-1B Skin Sens. 1,1A,1B H317  3.1/3/Oral Acute Tox. 3 H301  3.1/3/Inhal Acute Tox. 3 H331  3.1/4/Dermal Acute Tox. 4 H312
22 ppm	methanol	Index number: 603-001-00-X CAS: 67-56-1 EC: 200-659-6	 2.6/2 Flam. Liq. 2 H225  3.8/1 STOT SE 1 H370  3.1/3/Oral Acute Tox. 3 H301  3.1/3/Dermal Acute Tox. 3 H311  3.1/3/Inhal Acute Tox. 3 H331

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do NOT induce vomiting.

In case of Inhalation:

In case of inhalation, consult a doctor immediately and show him packing or label.

4.2. Most important symptoms and effects, both acute and delayed

None

4.3. Indication of any immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

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5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Use localized ventilation system.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Always keep in a well ventilated place.

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

7.3. Specific end use(s)

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

phosphoric acid ,orthophosphoric acid - CAS: 7664-38-2

EU - TWA(8h): 1 mg/m³ - STEL: 2 mg/m³

ACGIH - TWA(8h): 1 mg/m³ - STEL: 3 mg/m³ - Notes: URT, eye and skin irr

methanol - CAS: 67-56-1

EU - TWA(8h): 260 mg/m³, 200 ppm - Notes: Skin

ACGIH - TWA(8h): 200 ppm - STEL: 250 ppm - Notes: Skin, BEI - Headache, eye dam, dizziness, nausea

DNEL Exposure Limit Values

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phosphoric acid, orthophosphoric acid - CAS: 7664-38-2

Worker Industry: 2.92 mg/kg - Exposure: Human Inhalation - Frequency: Short Term, local effects

Consumer: 0.730 mg/kg - Exposure: Human Inhalation - Frequency: Short Term, local effects

sulphamidic acid; sulphamic acid; sulfamic acid - CAS: 5329-14-6

Worker Professional: 10 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

sulphamidic acid; sulphamic acid; sulfamic acid - CAS: 5329-14-6

Target: Fresh Water - Value: 0.048 mg/l

Target: Fresh Water - Value: 0.00480 mg/l

Target: 10 - Value: 0.480 mg/l

Target: Freshwater sediments - Value: 0.173 mg/kg

Target: Marine water sediments - Value: 0.0173 mg/kg

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Use respiratory protection where ventilation is insufficient or exposure is prolonged.

Use adequate protective respiratory equipment.

Thermal Hazards:

None

Environmental exposure controls:

None

Appropriate engineering controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes
Appearance and colour:	LIQUID, COLORLESS	--	--
Odour:	ACRID	--	--
Odour threshold:	N.A.	--	--
pH:	1	--	--
Melting point / freezing point:	N.A.	--	--
Initial boiling point and boiling range:	>100°C	--	--
Flash point:	N.A.	--	--
Evaporation rate:	N.A.	--	--
Solid/gas flammability:	NOT INFLAMMABLE	--	--
Upper/lower flammability or explosive limits:	N.A.	--	--

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Vapour pressure:	N.A.	--	--
Vapour density:	N.A.	--	--
Relative density:	1,11+/-0,05	--	--
Solubility in water:	COMPLETE	--	--
Solubility in oil:	N.A.	--	--
Partition coefficient (n-octanol/water):	N.A.	--	--
Auto-ignition temperature:	N.A.	--	--
Decomposition temperature:	N.A.	--	--
Viscosity:	N.A.	--	--
Explosive properties:	N.A.	--	--
Oxidizing properties:	N.A.	--	--

9.2. Other information

Properties	Value	Method:	Notes
Miscibility:	N.A.	--	--
Fat Solubility:	N.A.	--	--
Conductivity:	N.A.	--	--
Substance Groups relevant properties	N.A.	--	--

SECTION 10: Stability and reactivity

- 10.1. Reactivity
 - Stable under normal conditions
- 10.2. Chemical stability
 - Stable under normal conditions
- 10.3. Possibility of hazardous reactions
 - None
- 10.4. Conditions to avoid
 - Stable under normal conditions.
- 10.5. Incompatible materials
 - None in particular.
- 10.6. Hazardous decomposition products
 - None.

SECTION 11: Toxicological information

- 11.1. Information on toxicological effects
 - Toxicological information of the product:
 - N.A.
 - Toxicological information of the main substances found in the product:
 - phosphoric acid ... %, orthophosphoric acid ... % - CAS: 7664-38-2
 - a) acute toxicity:
 - Test: LD50 - Route: Oral - Species: Rat = 1530 mg/kg
 - b) skin corrosion/irritation:
 - Test: LD50 - Route: Skin - Species: Rabbit = 2740 mg/kg
 - sulphamidic acid; sulphamic acid; sulfamic acid - CAS: 5329-14-6
 - a) acute toxicity:
 - Test: LD50 - Route: Oral - Species: Rat = 3160 mg/kg
 - Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg
 - but-2-yne-1,4-diol; 2-butyne-1,4-diol - CAS: 110-65-6
 - LD50 (RABBIT) ORAL: 150 MG/KG

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If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as N.A.:

- a) acute toxicity;
- b) skin corrosion/irritation;
- c) serious eye damage/irritation;
- d) respiratory or skin sensitisation;
- e) germ cell mutagenicity;
- f) carcinogenicity;
- g) reproductive toxicity;
- h) STOT-single exposure;
- i) STOT-repeated exposure;
- j) aspiration hazard.

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.
phosphoric acid ... %, orthophosphoric acid ... % - CAS: 7664-38-2

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 138 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia = 265 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae > 100 mg/l - Duration h: 72

sulphamidic acid; sulphamic acid; sulfamic acid - CAS: 5329-14-6

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Fish = 70 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia = 72 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae = 32 mg/l - Duration h: 72

12.2. Persistence and degradability

N.A.

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information

14.1. UN number

ADR-UN number: 3264

14.2. UN proper shipping name

14.3. Transport hazard class(es)

ADR-Class: 8

14.4. Packing group

ADR-Packing Group: III

14.5. Environmental hazards

14.6. Special precautions for user

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ADR-Tunnel Restriction Code: E

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
N.A.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) 2015/830
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

Restriction 3

Restriction 40

Restrictions related to the substances contained:

No restriction.

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)

Regulation (EC) nr 648/2004 (detergents).

Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

NA

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Full text of phrases referred to in Section 3:

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

H290 May be corrosive to metals.

H319 Causes serious eye irritation.

H315 Causes skin irritation.

H412 Harmful to aquatic life with long lasting effects.

H373 May cause damage to organs through prolonged or repeated exposure.

H317 May cause an allergic skin reaction.

H301 Toxic if swallowed.

H331 Toxic if inhaled.

H312 Harmful in contact with skin.

H225 Highly flammable liquid and vapour.

H370 Causes damage to organs.

H311 Toxic in contact with skin.

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Hazard class and hazard category	Code	Description
Met. Corr. 1	2.16/1	Substance or mixture corrosive to metals, Category 1
Flam. Liq. 2	2.6/2	Flammable liquid, Category 2
Acute Tox. 3	3.1/3/Dermal	Acute toxicity (dermal), Category 3
Acute Tox. 3	3.1/3/Inhal	Acute toxicity (inhalation), Category 3
Acute Tox. 3	3.1/3/Oral	Acute toxicity (oral), Category 3
Acute Tox. 4	3.1/4/Dermal	Acute toxicity (dermal), Category 4
Skin Corr. 1A	3.2/1A	Skin corrosion, Category 1A
Skin Corr. 1B	3.2/1B	Skin corrosion, Category 1B
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
Skin Sens. 1,1A,1B	3.4.2/1-1A-1B	Skin Sensitisation, Category 1,1A,1B
STOT SE 1	3.8/1	Specific target organ toxicity - single exposure, Category 1
STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3
STOT RE 2	3.9/2	Specific target organ toxicity - repeated exposure, Category 2
Aquatic Chronic 3	4.1/C3	Chronic (long term) aquatic hazard, category 3

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Skin Corr. 1A, H314	On basis of test data (pH)
Eye Dam. 1, H318	On basis of test data (pH)
STOT SE 3, H335	Calculation method

This document was prepared by a competent person who has received appropriate training.
Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,
Commission of the European Communities
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van
Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality. It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS: Chemical Abstracts Service (division of the American Chemical Society).
CLP: Classification, Labeling, Packaging.
DNEL: Derived No Effect Level.
EINECS: European Inventory of Existing Commercial Chemical Substances.
GefStoffVO: Ordinance on Hazardous Substances, Germany.
GHS: Globally Harmonized System of Classification and Labeling of

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	Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.