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3DT-398 datasheet not added to this document

3D TRASAR™ 3DT133

Section: 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: **3D TRASAR™ 3DT133**
Substance type: CLP Mixture

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

Use of the Substance/Mixture : COOLING WATER TREATMENT
Identified uses : Cooling Water Treatment
Recommended restrictions on use : Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet:

COMPANY IDENTIFICATION
NALCO EUROPE B.V.
Postbus 627
2300 AP Leiden, The Netherlands
TEL: 0031 71 5241100

LOCAL COMPANY IDENTIFICATION
Nalco Ltd.
P.O. BOX 11, WINNINGTON AVENUE
NORTHWICH, CHESHIRE, U.K. CW8 4DX
TEL: +44 (0)1606 74488

For Product Safety information please contact: msdseame@nalco.com

1.4 Emergency telephone number:

Emergency telephone number : +32-(0)3-575-5555 Trans-European

Date of Compilation/Revision: 18.04.2018
Version Number: 1.4

Section: 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

This product is not classified, however, we recommend the following Precautionary Statements:

Precautionary Statements	: Prevention:	
	P202	Do not handle until all safety precautions have been read and understood.
	P262	Do not get in eyes, on skin, or on clothing.
	P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
	Response:	
	P314	Get medical advice/ attention if you feel unwell.

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2.3 Other hazards

None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Remarks : No hazardous ingredients

Section: 4. FIRST AID MEASURES

4.1 Description of first aid measures

- If inhaled : Get medical attention if symptoms occur.
- In case of skin contact : Wash off with soap and plenty of water.
Get medical attention if symptoms occur.
- In case of eye contact : Rinse with plenty of water.
Get medical attention if symptoms occur.
- If swallowed : Rinse mouth.
Get medical attention if symptoms occur.
- Protection of first-aiders : In event of emergency assess the danger before taking action.
Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Indication of immediate medical attention and special treatment needed

Treatment : No specific measures identified.

Section: 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Special hazards arising from the substance or mixture

- Specific hazards during firefighting : Not flammable or combustible.
- Hazardous combustion products : Decomposition products may include the following materials:
Carbon oxides
nitrogen oxides (NOx)
Sulphur oxides

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Oxides of phosphorus

5.3 Advice for firefighters

Special protective equipment for firefighters : Use personal protective equipment.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Section: 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel : Refer to protective measures listed in sections 7 and 8.

Advice for emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

6.2 Environmental precautions

Environmental precautions : No special environmental precautions required.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Stop leak if safe to do so.
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
Flush away traces with water.
For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

6.4 Reference to other sections

See Section 1 for emergency contact information.
For personal protection see section 8.
See Section 13 for additional waste treatment information.

Section: 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling : For personal protection see section 8. Wash hands after handling.

Hygiene measures : Wash hands before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep out of reach of children. Keep container tightly closed.
Store in suitable labelled containers.

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Suitable material : The following compatibility data is suggested based on similar product data and/or industry experience: Buna-N, Epoxy phenolic resin, HDPE (high density polyethylene), MDPE (medium density polyethylene), Polypropylene, Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.

Unsuitable material : The following compatibility data is suggested based on similar product data and/or industry experience: Stainless Steel 304, Brass, Neoprene, Viton, EPDM, Hypalon

7.3 Specific end uses

Specific use(s) : COOLING WATER TREATMENT

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

Hygiene measures : Wash hands before breaks and immediately after handling the product.

Eye/face protection (EN 166) : Safety glasses

Hand protection (EN 374) : Recommended preventive skin protection
Gloves
Nitrile rubber
butyl-rubber
Breakthrough time: 1 – 4 hours
Minimum thickness for butyl-rubber 0.3 mm for nitrile rubber 0.2 mm or equivalent (please refer to the gloves manufacturer/distributor for advise).
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin and body protection (EN 14605) : Wear suitable protective clothing.

Respiratory protection (EN 143, 14387) : When respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization, consider the use of certified respiratory protection equipment meeting EU requirements (89/656/EEC, 89/686/EEC), or equivalent, with filter type:P

Environmental exposure controls

General advice : Consider the provision of containment around storage

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vessels.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	: Liquid
Colour	: orange
Odour	: Neutral
Flash point	: Not applicable.
pH	: 3.5, 100 %
Odour Threshold	: no data available
Melting point/freezing point	: POUR POINT: -3.4 °C
Initial boiling point and boiling range	: no data available
Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: no data available
Relative vapour density	: no data available
Relative density	: 1.16 (20 °C)
Density	: 1.15 g/cm ³
Solubility(ies)	
Water solubility	: completely soluble
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Thermal decomposition	: no data available
Viscosity	
Viscosity, dynamic	: no data available
Viscosity, kinematic	: 19 mm ² /s (20 °C)
Explosive properties	: no data available
Oxidizing properties	: no data available

9.2 Other information

VOC : 0 %

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Section: 10. STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

10.5 Incompatible materials

Materials to avoid : Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.

10.6 Hazardous decomposition products

Hazardous decomposition products : Decomposition products may include the following materials:
Carbon oxides
nitrogen oxides (NOx)
Sulphur oxides
Oxides of phosphorus

Section: 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

Toxicity

Product

Acute oral toxicity : There is no data available for this product.
Acute inhalation toxicity : There is no data available for this product.
Skin corrosion/irritation : There is no data available for this product.
Serious eye damage/eye irritation : There is no data available for this product.
Respiratory or skin sensitization : There is no data available for this product.
Carcinogenicity : No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive effects : No toxicity to reproduction

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- Germ cell mutagenicity : Contains no ingredient listed as a mutagen
- Teratogenicity : There is no data available for this product.
- STOT - single exposure : Based on available data, the classification criteria are not met.
- STOT - repeated exposure : There is no data available for this product.
- Aspiration toxicity : No aspiration toxicity classification

Potential Health Effects

- Eyes : Health injuries are not known or expected under normal use.
- Skin : Health injuries are not known or expected under normal use.
- Ingestion : Health injuries are not known or expected under normal use.
- Inhalation : Health injuries are not known or expected under normal use.
- Chronic Exposure : Health injuries are not known or expected under normal use.

Experience with human exposure

- Eye contact : No symptoms known or expected.
- Skin contact : No symptoms known or expected.
- Ingestion : No symptoms known or expected.
- Inhalation : No symptoms known or expected.
- Further information** : no data available

Section: 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Product

- Environmental Effects : This product has no known ecotoxicological effects.
- Toxicity to fish : 96 h NOEC Rainbow Trout: 6,000 mg/l
Test substance: Product
- 96 h LC50 Rainbow Trout: > 10,000 mg/l
Test substance: Product
- Toxicity to daphnia and other aquatic invertebrates : 48 h LC50 Ceriodaphnia dubia: 1,227 mg/l
Test substance: Product
- 48 h NOEC Ceriodaphnia dubia: 648 mg/l
Test substance: Product

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96 h LC50 Mysid Shrimp (*Mysidopsis bahia*): > 10,000 mg/l
Test substance: Product

96 h NOEC Mysid Shrimp (*Mysidopsis bahia*): 6,000 mg/l
Test substance: Product

Toxicity to algae : no data available

12.2 Persistence and degradability

Product

Biodegradability : The organic portion of this preparation is expected to be readily biodegradable.

TOTAL ORGANIC CARBON (TOC): 95,000 mg/l

Biological Oxygen Demand (BOD): 5 d 3,400 mg/l

Chemical Oxygen Demand (COD): 240,000 mg/l

12.3 Bioaccumulative potential

Product

Bioaccumulation : This preparation or material is not expected to bioaccumulate.

12.4 Mobility in soil

Product

The portion in water is expected to be soluble or dispersible.

12.5 Results of PBT and vPvB assessment

Product

Assessment : 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.

12.6 Other adverse effects

No adverse effects expected.

Section: 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with the European Directives on waste and hazardous waste. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

13.1 Waste treatment methods

Product : Where possible recycling is preferred to disposal or incineration.
If recycling is not practicable, dispose of in compliance with local regulations.

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Dispose of wastes in an approved waste disposal facility.

- Contaminated packaging : Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.
- Guidance for Waste Code selection : Inorganic wastes containing not dangerous substances with concentration $\geq 0.1\%$. If this product is used in any further processes, the final user must redefine and assign the most appropriate European Waste Catalogue Code. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable European (EU Directive 2008/98/EC) and local regulations.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (ADR/ADN/RID)

- 14.1 UN number: Not applicable.
14.2 UN proper shipping name: PRODUCT IS NOT REGULATED DURING TRANSPORTATION
14.3 Transport hazard class(es): Not applicable.
14.4 Packing group: Not applicable.
14.5 Environmental hazards: No
14.6 Special precautions for user: Not applicable.

Air transport (IATA)

- 14.1 UN number: Not applicable.
14.2 UN proper shipping name: PRODUCT IS NOT REGULATED DURING TRANSPORTATION
14.3 Transport hazard class(es): Not applicable.
14.4 Packing group: Not applicable.
14.5 Environmental hazards: No
14.6 Special precautions for user: Not applicable.

Sea transport (IMDG/IMO)

- 14.1 UN number: Not applicable.
14.2 UN proper shipping name: PRODUCT IS NOT REGULATED DURING TRANSPORTATION
14.3 Transport hazard class(es): Not applicable.
14.4 Packing group: Not applicable.
14.5 Environmental hazards: No
14.6 Special precautions for user: Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.

Section: 15. REGULATORY INFORMATION

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15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

INTERNATIONAL REGULATIONS

NSF NON-FOOD COMPOUNDS REGISTRATION PROGRAM (former USDA List of Proprietary Substances & Non-Food Compounds):

NSF Registration number for this product is: 149777

This product is acceptable for treatment of cooling and retort water (G5) in and around food processing areas. This product is acceptable for treating boilers, steam lines, and/or cooling systems (G7) where neither the treated water nor the steam produced may contact edible products in and around food processing areas.

INTERNATIONAL CHEMICAL CONTROL LAWS

CANADA

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

United States TSCA Inventory

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

NATIONAL REGULATIONS GERMANY

Water contaminating class : WGK 1

(Germany) Classification according VwVwS, Annex 4.

15.2 Chemical Safety Assessment:

A Chemical Safety Assessment has been carried out for the substance(s) that makes/make up this material or for the material itself.

Section: 16. OTHER INFORMATION

Procedure used to derive the classification according to REGULATION (EC) No 1272/2008

Classification	Justification
Not a hazardous substance or mixture.	Calculation method

Full text of other abbreviations

ADN – European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR – European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS – Australian Inventory of Chemical Substances; ASTM – American Society for the Testing of Materials; bw – Body weight; CLP – Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR – Carcinogen, Mutagen or Reproductive Toxicant; DIN – Standard of the German Institute for Standardisation; DSL – Domestic Substances List (Canada); ECHA – European Chemicals Agency; EC-Number – European Community number; 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; 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; NO(A)EC – No

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Observed (Adverse) Effect Concentration; NO(A)EL – No Observed (Adverse) Effect Level; NOELR – No Observable Effect Loading Rate; 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; RID – Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT – Self-Accelerating Decomposition Temperature; SDS – Safety Data Sheet; TCSI – Taiwan Chemical Substance Inventory; TRGS – Technical Rule for Hazardous Substances; TSCA – Toxic Substances Control Act (United States); UN – United Nations; vPvB – Very Persistent and Very Bioaccumulative

Further information

Sources of key data used to compile the Safety Data Sheet : IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

The possible key literature references and data sources which may have been used in conjunction with the consideration of expert judgment to compile this Safety Data Sheet: European regulations/directives (including (EC) No. 1907/2006, (EC) No. 1272/2008), supplier data, inter-net, ESIS, IUCLID, ERICards, Non European official regulatory data and other data sources.

Prepared By : Regulatory Affairs

Numbers quoted in the MSDS are given in the format: 1,000,000 = 1 million and 1,000 = 1 thousand. 0.1 = 1 tenth and 0.001 = 1 thousandth

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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.

Annex: Exposure Scenarios

Exposure Scenario: Cooling Water Treatment

Life Cycle Stage	:	Industrial uses: Uses of substances as such or in preparations at industrial sites
Sector of use	:	<p>SU4 Manufacture of food products</p> <p>SU5 Manufacture of textiles, leather, fur</p> <p>SU6b Manufacture of pulp, paper and paper products</p> <p>SU6a Manufacture of wood and wood products</p> <p>SU7 Printing and reproduction of recorded media</p>

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SU8	Manufacture of bulk, large scale chemicals (including petroleum products)
SU9	Manufacture of fine chemicals
SU 10	Formulation [mixing] of preparations and/ or re-packaging (excluding alloys)
SU11	Manufacture of rubber products
SU12	Manufacture of plastics products, including compounding and conversion
SU13	Manufacture of other non-metallic mineral products, e.g. plasters, cement
SU14	Manufacture of basic metals, including alloys
SU15	Manufacture of fabricated metal products, except machinery and equipment
SU16	Manufacture of computer, electronic and optical products, electrical equipment
SU17	General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment
SU20	Health services
SU23	Electricity, steam, gas water supply and sewage treatment
SU24	Scientific research and development

Contributing scenario controlling environmental exposure for:

Environmental release category	: ERC4	Industrial use of processing aids in processes and products, not becoming part of articles
Daily amount per site	: 1000 kg	
Type of Sewage Treatment Plant	: none	

Contributing scenario controlling worker exposure for:

Process category	: PROC8a	Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities
Exposure duration	: 15 min	
Operational conditions and risk management measures	: Indoor	
		Local Exhaust Ventilation is not required
General ventilation	Ventilation rate per hour:	1
Skin Protection	: Yes: See Section 8	
Respiratory Protection	: No	

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Contributing scenario controlling worker exposure for:

Process category : **PROC3** Use in closed batch process (synthesis or formulation)
Exposure duration : 60 min
Operational conditions and risk management measures : Indoor

Local Exhaust Ventilation is not required
General ventilation Ventilation rate per hour: 1
Skin Protection : Yes: See Section 8
Respiratory Protection : No

Contributing scenario controlling worker exposure for:

Process category : **PROC15** Use as laboratory reagent
Exposure duration : 60 min
Operational conditions and risk management measures : Indoor

Local Exhaust Ventilation is not required
General ventilation Ventilation rate per hour: 1
Skin Protection : Yes: See Section 8
Respiratory Protection : No

Contributing scenario controlling worker exposure for:

Process category : **PROC28** Manual maintenance (cleaning and repair) of machinery
Exposure duration : 240 min
Operational conditions and risk management measures : Indoor

Local Exhaust Ventilation is not required
General ventilation Ventilation rate per hour: 1
Skin Protection : Yes: See Section 8
Respiratory Protection : No

3D TRASAR™ 3DT184

Section: 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: **3D TRASAR™ 3DT184**
Substance type: CLP Mixture

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

Use of the Substance/Mixture : CORROSION INHIBITOR
Identified uses : Cooling Water Treatment
Recommended restrictions on use : Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet:

COMPANY IDENTIFICATION
NALCO EUROPE B.V.
Postbus 627
2300 AP Leiden, The Netherlands
TEL: 0031 71 5241100

LOCAL COMPANY IDENTIFICATION
Nalco Ltd.
P.O. BOX 11, WINNINGTON AVENUE
NORTHWICH, CHESHIRE, U.K. CW8 4DX
TEL: +44 (0)1606 74488

For Product Safety information please contact: msdseame@nalco.com

1.4 Emergency telephone number:

Emergency telephone number : +32-(0)3-575-5555 Trans-European

Date of Compilation/Revision: 29.11.2019
Version Number: 2.1

Section: 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Corrosive to metals, Category 1	H290
Skin corrosion, Sub-category 1B	H314
Serious eye damage, Category 1	H318

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

Precautionary Statements : **Prevention:**
P280 Wear protective gloves/ protective clothing/
eye protection/ face protection.

Response:

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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.
 P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
 P305 + P351 + P338 + P310 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 or doctor/ physician.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:
 Phosphoric Acid

2.3 Other hazards

Do not mix with bleach or other chlorinated products – will cause chlorine gas.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

Chemical Name	CAS-No. EC-No. REACH No.	Classification (REGULATION (EC) No 1272/2008)	Concentration: [%]
Phosphoric Acid	7664-38-2 231-633-2 01-2119485924-24	Skin corrosion Category 1B; H314 Corrosive to metals Category 1; H290	30 - < 50

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section: 4. FIRST AID MEASURES

4.1 Description of first aid measures

If inhaled : Remove to fresh air.
 Treat symptomatically.
 Get medical attention if symptoms occur.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.
 Use a mild soap if available.
 Wash clothing before reuse.
 Thoroughly clean shoes before reuse.
 Get medical attention immediately.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids,

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for at least 15 minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
Get medical attention immediately.

If swallowed : Rinse mouth with water.
Do NOT induce vomiting.
Never give anything by mouth to an unconscious person.
Get medical attention immediately.

Protection of first-aiders : In event of emergency assess the danger before taking action.
Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Indication of immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

Section: 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Not flammable or combustible.

Hazardous combustion products : Depending on combustion properties, decomposition products may include following materials:
Carbon oxides
nitrogen oxides (NOx)
Sulphur oxides
Oxides of phosphorus

5.3 Advice for firefighters

Special protective equipment for firefighters : Use personal protective equipment.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel : Ensure adequate ventilation.
Keep people away from and upwind of spill/leak.
Avoid inhalation, ingestion and contact with skin and eyes.
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

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Ensure clean-up is conducted by trained personnel only.
Refer to protective measures listed in sections 7 and 8.

Advice for emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

6.2 Environmental precautions

Environmental precautions : Do not allow contact with soil, surface or ground water.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Stop leak if safe to do so.
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
Flush away traces with water.
For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

6.4 Reference to other sections

See Section 1 for emergency contact information.
For personal protection see section 8.
See Section 13 for additional waste treatment information.

Section: 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling : Do not ingest. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation. Do not mix with bleach or other chlorinated products – will cause chlorine gas.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep away from strong bases. Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.

Suitable material : Keep in properly labelled containers.

7.3 Specific end uses

Specific use(s) : CORROSION INHIBITOR

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

3D TRASAR™ 3DT184**8.1 Control parameters****Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Phosphoric Acid	7664-38-2	TWA	1 mg/m ³	UKCOSSTD
		STEL	2 mg/m ³	UKCOSSTD

DNEL

Phosphoric Acid	:	End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 1 mg/m ³
	:	End Use: Workers Exposure routes: Inhalation Potential health effects: Acute local effects Value: 2 mg/m ³
	:	End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 0.73 mg/m ³

8.2 Exposure controls**Appropriate engineering controls**

Effective exhaust ventilation system.

Maintain air concentrations below occupational exposure standards.

Individual protection measures

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

Eye/face protection (EN 166) : Safety goggles
Face-shield

Hand protection (EN 374) : Recommended preventive skin protection
Gloves
Nitrile rubber
butyl-rubber
Breakthrough time: 1 – 4 hours
Minimum thickness for butyl-rubber 0.7 mm for nitrile rubber 0.4 mm or equivalent (please refer to the gloves manufacturer/distributor for advise).
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin and body protection (EN 14605) : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing including appropriate safety shoes

Respiratory protection (EN 143, 14387) : When respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by

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measures, methods or procedures of work organization, consider the use of certified respiratory protection equipment meeting EU requirements (89/656/EEC, (EU) 2016/425), or equivalent, with filter type: E-P

The Personal Protective Equipment (PPE) recommendations provided above have been made in good faith based on typical expected conditions of use. PPE selection should always be completed in conjunction with a proper risk assessment and in accordance with a PPE management program.

Environmental exposure controls

General advice : Consider the provision of containment around storage vessels.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	: Liquid
Colour	: brown
Odour	: odourless
Flash point	: > 93.3 °C
pH	: 1.0, 100 %
Odour Threshold	: no data available
Melting point/freezing point	: Freezing Point: -22.5 °C
Initial boiling point and boiling range	: 100 °C
Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: 56 mm Hg (38 °C)
Relative vapour density	: no data available
Relative density	: 1.24 (15.6 °C)
Density	: 1.24 g/cm ³
Solubility(ies)	
Water solubility	: completely soluble
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Thermal decomposition	: no data available
Viscosity	

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Viscosity, dynamic : 3 mPa.s (25 °C)

Viscosity, kinematic : no data available

Explosive properties : no data available

Oxidizing properties : no data available

9.2 Other information

Impact sensitivity : Not expected to be sensitive to mechanical impact.

VOC : 0 %

Section: 10. STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Do not mix with bleach or other chlorinated products – will cause chlorine gas.

10.4 Conditions to avoid

Conditions to avoid : Extremes of temperature

10.5 Incompatible materials

Materials to avoid : Strong bases
Strong oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products : Depending on combustion properties, decomposition products may include following materials:
Carbon oxides
nitrogen oxides (NOx)
Sulphur oxides
Oxides of phosphorus

Section: 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

Toxicity

Product

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- Acute oral toxicity : There is no data available for this product.
- Acute inhalation toxicity : There is no data available for this product.
- Acute dermal toxicity : There is no data available for this product.
- Skin corrosion/irritation : There is no data available for this product.
- Serious eye damage/eye irritation : There is no data available for this product.
- Respiratory or skin sensitization : There is no data available for this product.
- Carcinogenicity : No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- Reproductive effects : No toxicity to reproduction
- Germ cell mutagenicity : Contains no ingredient listed as a mutagen
- Teratogenicity : There is no data available for this product.
- STOT - single exposure : Based on available data, the classification criteria are not met.
- STOT - repeated exposure : There is no data available for this product.
- Aspiration toxicity : No aspiration toxicity classification

Components

- Acute oral toxicity : Phosphoric Acid
LD50 rat: > 2,600 mg/kg

Components

- Acute dermal toxicity : Phosphoric Acid
LD50 rabbit: > 2,000 mg/kg

Potential Health Effects

- Eyes : Causes serious eye damage.
- Skin : Causes severe skin burns.
- Ingestion : Causes digestive tract burns.
- Inhalation : May cause nose, throat, and lung irritation.
- Chronic Exposure : Health injuries are not known or expected under normal use.

Experience with human exposure

- Eye contact : Redness, Pain, Corrosion
- Skin contact : Redness, Pain, Corrosion
- Ingestion : Corrosion, Abdominal pain

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Inhalation : Respiratory irritation, Cough

Further information : no data available

Section: 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Product

Environmental Effects : This product has no known ecotoxicological effects.

Toxicity to fish : 96 hrs LC50 Pimephales promelas (fathead minnow):
3,660 mg/l
Test substance: Similar Product

96 hrs LC50 Inland Silverside: > 5,000 mg/l
Test substance: Product

96 hrs NOEC Inland Silverside: 5,000 mg/l
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates : 96 hrs LC50 Mysid Shrimp (Mysidopsis bahia): 2,237 mg/l
Test substance: Product

48 hrs LC50 Daphnia magna (Water flea): 3,536 mg/l
Test substance: Product

96 hrs NOEC Mysid Shrimp (Mysidopsis bahia): 1,250 mg/l
Test substance: Product

48 hrs NOEC Daphnia magna (Water flea): 2,500 mg/l
Test substance: Product

Toxicity to algae : no data available

Toxicity to fish (Chronic toxicity) : 7 Days EC25 / IC25 Fathead Minnow: 1,972 mg/l
Test substance: Similar Product

7 Days NOEC Fathead Minnow: 1,250 mg/l
Test substance: Similar Product

Components

Toxicity to daphnia and other aquatic invertebrates : Phosphoric Acid
48 h EC50 Daphnia magna (Water flea): > 100 mg/l

Components

Toxicity to algae : Phosphoric Acid
72 h EC50 Desmodesmus subspicatus (green algae): > 100 mg/l

12.2 Persistence and degradability

Product

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Biodegradability : Greater than 95% of this product consists of inorganic substances for which a biodegradation value is not applicable.

TOTAL ORGANIC CARBON (TOC): 1,000 mg/l (Product)

Biological Oxygen Demand (BOD): 5 d 2,460 mg/l (Product)

Chemical Oxygen Demand (COD): 3,000 mg/l (Product)

Components

Biodegradability : Phosphoric Acid
Result: Not applicable - inorganic

12.3 Bioaccumulative potential

Product

Bioaccumulation : This preparation or material is not expected to bioaccumulate.

12.4 Mobility in soil

Product

This substance is water soluble and is expected to remain primarily in water.

12.5 Results of PBT and vPvB assessment

Product

Assessment : 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.

12.6 Other adverse effects

No adverse effects expected.

Section: 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with the European Directives on waste and hazardous waste. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

13.1 Waste treatment methods

Product : Where possible recycling is preferred to disposal or incineration.
If recycling is not practicable, dispose of in compliance with local regulations.
Dispose of wastes in an approved waste disposal facility.

Contaminated packaging : Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

Guidance for Waste Code selection : Inorganic wastes containing dangerous substances. If this product is used in any further processes, the final user must

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redefine and assign the most appropriate European Waste Catalogue Code. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable European (EU Directive 2008/98/EC) and local regulations.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (ADR/ADN/RID)

14.1 UN number:	UN 1805
14.2 UN proper shipping name:	PHOSPHORIC ACID SOLUTION
14.3 Transport hazard class(es):	8
14.4 Packing group:	III
14.5 Environmental hazards:	No
14.6 Special precautions for user:	Not applicable.

Air transport (IATA)

14.1 UN number:	UN 1805
14.2 UN proper shipping name:	PHOSPHORIC ACID SOLUTION
14.3 Transport hazard class(es):	8
14.4 Packing group:	III
14.5 Environmental hazards:	No
14.6 Special precautions for user:	Not applicable.

Sea transport (IMDG/IMO)

14.1 UN number:	UN 1805
14.2 UN proper shipping name:	PHOSPHORIC ACID SOLUTION
14.3 Transport hazard class(es):	8
14.4 Packing group:	III
14.5 Environmental hazards:	No
14.6 Special precautions for user:	Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable.

Section: 15. REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:****INTERNATIONAL REGULATIONS**

FOOD AND DRUG ADMINISTRATION (FDA) Federal Food, Drug and Cosmetic Act

When use situations necessitate compliance with FDA regulations, this product is acceptable under: This product has been affirmed as GRAS (Generally Recognized as Safe) under 21 CFR 570.30 for use in animal feed, when used according to the following limitations:, the following use conditions.

The following limitations apply:

Maximum dosage	Limitation
25 PPM (AS PRODUCT)	

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Product may be used as an antiscalant in cooling towers in ethanol distillation plants where the by-product dried distiller's grain (DDG) may also become component of animal feed.

INTERNATIONAL CHEMICAL CONTROL LAWS**CANADA**

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

United States TSCA Inventory

On or in compliance with the active portion of the TSCA inventory

NATIONAL REGULATIONS GERMANY

Water contaminating class : WGK 1
(Germany) Classification according to AwSV, Annex 1

15.2 Chemical Safety Assessment:

A Chemical Safety Assessment has been carried out for some of the substances in this mixture.

Section: 16. OTHER INFORMATION**Procedure used to derive the classification according to REGULATION (EC) No 1272/2008**

Classification	Justification
Corrosive to metals 1, H290	Calculation method
Skin corrosion 1B, H314	Calculation method
Serious eye damage 1, H318	Calculation method

Full text of H-Statements

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

Full text of other abbreviations

ADN – European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR – European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS – Australian Inventory of Chemical Substances; ASTM – American Society for the Testing of Materials; bw – Body weight; CLP – Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR – Carcinogen, Mutagen or Reproductive Toxicant; DIN – Standard of the German Institute for Standardisation; DSL – Domestic Substances List (Canada); ECHA – European Chemicals Agency; EC-Number – European Community number; 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; 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; NO(A)EC – No Observed (Adverse) Effect Concentration; NO(A)EL – No Observed (Adverse) Effect Level; NOELR – No Observable Effect Loading Rate; 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)

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No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID – Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT – Self-Accelerating Decomposition Temperature; SDS – Safety Data Sheet; TCSI – Taiwan Chemical Substance Inventory; TRGS – Technical Rule for Hazardous Substances; TSCA – Toxic Substances Control Act (United States); UN – United Nations; vPvB – Very Persistent and Very Bioaccumulative

Further information

Sources of key data used to compile the Safety Data Sheet : IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

The possible key literature references and data sources which may have been used in conjunction with the consideration of expert judgment to compile this Safety Data Sheet: European regulations/directives (including (EC) No. 1907/2006, (EC) No. 1272/2008), supplier data, inter-net, ESIS, IUCLID, ERICards, Non European official regulatory data and other data sources.

Prepared By : Regulatory Affairs

Numbers quoted in the MSDS are given in the format: 1,000,000 = 1 million and 1,000 = 1 thousand. 0.1 = 1 tenth and 0.001 = 1 thousandth

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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.

Annex: Exposure Scenarios

Exposure Scenario: Cooling Water Treatment

Life Cycle Stage	:	Industrial uses: Uses of substances as such or in preparations at industrial sites
Sector of use	:	SU4 Manufacture of food products
		SU5 Manufacture of textiles, leather, fur
		SU6b Manufacture of pulp, paper and paper products
		SU6a Manufacture of wood and wood products
		SU7 Printing and reproduction of recorded media
		SU8 Manufacture of bulk, large scale chemicals (including petroleum products)
		SU9 Manufacture of fine chemicals

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SU 10	Formulation [mixing] of preparations and/ or re-packaging (excluding alloys)
SU11	Manufacture of rubber products
SU12	Manufacture of plastics products, including compounding and conversion
SU13	Manufacture of other non-metallic mineral products, e.g. plasters, cement
SU14	Manufacture of basic metals, including alloys
SU15	Manufacture of fabricated metal products, except machinery and equipment
SU16	Manufacture of computer, electronic and optical products, electrical equipment
SU17	General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment
SU20	Health services
SU23	Electricity, steam, gas water supply and sewage treatment
SU24	Scientific research and development

Contributing scenario controlling environmental exposure for:

Environmental release category	: ERC4	Industrial use of processing aids in processes and products, not becoming part of articles
Daily amount per site	: 1000 kg	
Type of Sewage Treatment Plant	: none	

Contributing scenario controlling worker exposure for:

Process category	: PROC8a	Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities
Exposure duration	: 15 min	
Operational conditions and risk management measures	: Indoor	
		Local Exhaust Ventilation is not required
General ventilation	Ventilation rate per hour:	1
Skin Protection	: Yes: See Section 8	
Respiratory Protection	: No	

Contributing scenario controlling worker exposure for:

Process category	: PROC3	Use in closed batch process (synthesis or formulation)
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Exposure duration : 60 min

Operational conditions and risk management measures : Indoor

Local Exhaust Ventilation is not required

General ventilation Ventilation rate per hour: 1

Skin Protection : Yes: See Section 8

Respiratory Protection : No

Contributing scenario controlling worker exposure for:

Process category : **PROC15** Use as laboratory reagent

Exposure duration : 60 min

Operational conditions and risk management measures : Indoor

Local Exhaust Ventilation is not required

General ventilation Ventilation rate per hour: 1

Skin Protection : Yes: See Section 8

Respiratory Protection : No

Contributing scenario controlling worker exposure for:

Process category : **PROC28** Manual maintenance (cleaning and repair) of machinery

Exposure duration : 240 min

Operational conditions and risk management measures : Indoor

Local Exhaust Ventilation is not required

General ventilation Ventilation rate per hour: 1

Skin Protection : Yes: See Section 8

Respiratory Protection : No

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Section: 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: 3D TRASAR™ 3DT398
Substance type: CLP Mixture

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

Use of the Substance/Mixture : CORROSION INHIBITOR
Recommended restrictions on use : Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet:

Company : Nalco Ltd.
P.O. BOX 11, WINNINGTON AVENUE
NORTHWICH, CHESHIRE, U.K. CW8 4DX
+44 (0)1606 74488
For Product Safety information please contact:
msdseame@nalco.com

1.4 Emergency telephone number:

Emergency telephone number : +44 1618841235
+32-(0)3-575-5555 Trans-European

Date of Compilation/Revision: 20.12.2021
Version Number: 4.0

Section: 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin corrosion, Category 1	H314
Serious eye damage, Category 1	H318
Skin sensitization, Category 1	H317

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms	:	
Signal Word	:	Danger
Hazard Statements	:	H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction.
Precautionary Statements	:	Prevention: P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing

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protection.

Response:

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.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

P305 + P351 + P338 + P310 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 or doctor/ physician.

Hazardous components which must be listed on the label:

Heteropolycyclic-alkanol, carbomonocycle-alkanesulfonateMethanesulfonic AcidAcetic Acid

2.3 Other hazards

Do not mix with bleach or other chlorinated products – will cause chlorine gas.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS**3.2 Mixtures****Hazardous components**

Chemical Name	CAS-No. EC-No. REACH No.	Classification (REGULATION (EC) No 1272/2008)	Concentration: [%]
Heteropolycyclic-alkanol, carbomonocycle- alkanesulfonate	2102669-58-7	Serious eye damage Category 1; H318 Skin sensitization Sub-category 1B; H317 Chronic aquatic toxicity Category 3; H412	20 - < 25
Methanesulfonic Acid	75-75-2 200-898-6 01-2119491166-34	Acute toxicity Category 4; H302 Acute toxicity Category 4; H312 Skin corrosion Category 1B; H314	10 - < 20
Acetic Acid	64-19-7 200-580-7 01-2119475328-30	Nota B Flammable liquids Category 3; H226 Skin corrosion Sub-category 1A; H314 Serious eye damage Category 1; H318 Skin corrosion Category 1A H314 >= 90 % Skin corrosion Category 1B H314 25 - < 90 % Skin irritation Category 2 H315 10 - < 25 % Eye irritation Category 2 H319 10 - < 25 %	10 - < 20

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section: 4. FIRST AID MEASURES

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4.1 Description of first aid measures

- If inhaled : Remove to fresh air.
Treat symptomatically.
Get medical attention if symptoms occur.
- In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
Get medical attention immediately.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
Get medical attention immediately.
- If swallowed : Rinse mouth with water.
Do NOT induce vomiting.
Never give anything by mouth to an unconscious person.
Get medical attention immediately.
- Protection of first-aiders : In event of emergency assess the danger before taking action.
Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Indication of immediate medical attention and special treatment needed

- Treatment : Treat symptomatically.

Section: 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

- Specific hazards during firefighting : Not flammable or combustible.
- Hazardous combustion products : Depending on combustion properties, decomposition products may include following materials:
Carbon oxides
nitrogen oxides (NOx)
Sulphur oxides

5.3 Advice for firefighters

- Special protective equipment : Use personal protective equipment.

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for firefighters

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel : Ensure adequate ventilation.
Keep people away from and upwind of spill/leak.
Avoid inhalation, ingestion and contact with skin and eyes.
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Ensure clean-up is conducted by trained personnel only.
Refer to protective measures listed in sections 7 and 8.

Advice for emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

6.2 Environmental precautions

Environmental precautions : Do not allow contact with soil, surface or ground water.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Stop leak if safe to do so.
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
Flush away traces with water.
For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

6.4 Reference to other sections

See Section 1 for emergency contact information.
For personal protection see section 8.
See Section 13 for additional waste treatment information.

Section: 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling : Do not ingest. Do not breathe spray, vapour. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation. Do not mix with bleach or other chlorinated products – will cause chlorine gas.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

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7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep away from strong bases. Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.

Suitable material : Keep in properly labelled containers.

Unsuitable material :
not determined

7.3 Specific end uses

Specific use(s) : CORROSION INHIBITOR

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Acetic Acid	64-19-7	TWA	10 ppm 25 mg/m3	2017/164/EU
Further information		Indicative		
		STEL	20 ppm 50 mg/m3	2017/164/EU
Further information		Indicative		
		STEL	20 ppm 50 mg/m3	UKCOSSTD
		TWA	10 ppm 25 mg/m3	UKCOSSTD

8.2 Exposure controls

Appropriate engineering controls

Effective exhaust ventilation system.
Maintain air concentrations below occupational exposure standards.

Individual protection measures

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

Eye/face protection (EN 166) : Safety goggles
Face-shield

Hand protection (EN 374) : Recommended preventive skin protection
Gloves
Nitrile rubber
butyl-rubber
Breakthrough time: 1 – 4 hours
Minimum thickness for butyl-rubber 0.7 mm for nitrile rubber 0.4 mm or equivalent (please refer to the gloves)

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manufacturer/distributor for advise).
 Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin and body protection (EN 14605) : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing including appropriate safety shoes

Respiratory protection (EN 143, 14387) : When respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization, consider the use of certified respiratory protection equipment meeting EU requirements (89/656/EEC, (EU) 2016/425), or equivalent, with filter type: A-P

The Personal Protective Equipment (PPE) recommendations provided above have been made in good faith based on typical expected conditions of use. PPE selection should always be completed in conjunction with a proper risk assessment and in accordance with a PPE management program.

Environmental exposure controls

General advice : Consider the provision of containment around storage vessels.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : clear, dark brown

Odour : vinegar-like

Flash point : 98.60 °C
 Method: ASTM D 93

pH : < 1.5, (25 °C)Method: ASTM E 70

Odour Threshold : no data available

Melting point/freezing point : Freezing Point: -16.50 °C, ASTM D-1177

Initial boiling point and boiling range : 102.0 °CMethod: ASTM D 1120-72

Evaporation rate : no data available

Flammability (solid, gas) : no data available

Upper explosion limit : no data available

Lower explosion limit : no data available

Vapour pressure : no data available

Relative vapour density : no data available

Relative density : 1.108 (25 °C)

Solubility(ies)

Water solubility : Miscible

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Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	log Pow: 1.89Method: OECD Test Guideline 117 GLP: yes Active Substance
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity		
Viscosity, dynamic	:	no data available
Viscosity, kinematic	:	3.77 mm ² /s (25 °C) Method: ASTM D 445
Explosive properties		
Explosive properties	:	no data available
Oxidizing properties	:	no data available

9.2 Other information

no data available

Section: 10. STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Do not mix with bleach or other chlorinated products – will cause chlorine gas.

10.4 Conditions to avoid

Conditions to avoid : Extremes of temperature

10.5 Incompatible materials

Materials to avoid : Strong bases

10.6 Hazardous decomposition products

Hazardous decomposition products : Depending on combustion properties, decomposition products may include following materials:
Carbon oxides
nitrogen oxides (NO_x)
Sulphur oxides

Section: 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Information on likely routes of : Inhalation, Eye contact, Skin contact

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exposure

Toxicity

Product

- Acute oral toxicity : Acute toxicity estimate : > 2,000 mg/kg
- Acute inhalation toxicity : There is no data available for this product.
- Acute dermal toxicity : Acute toxicity estimate : > 2,000 mg/kg
- Skin corrosion/irritation : There is no data available for this product.
- Serious eye damage/eye irritation : There is no data available for this product.
- Respiratory or skin sensitization : There is no data available for this product.
- Carcinogenicity : No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- Reproductive effects : No toxicity to reproduction
- Germ cell mutagenicity : Contains no ingredient listed as a mutagen
- Teratogenicity : There is no data available for this product.
- STOT - single exposure : There is no data available for this product.
- STOT - repeated exposure : There is no data available for this product.
- Aspiration toxicity : No aspiration toxicity classification

Components

- Acute oral toxicity : Heteropolycyclic-alkanol, carbomonocycle-alkanesulfonate
LD50 rat: > 2,000 mg/kg
Test substance: Information given is based on data obtained from similar substances.
- Methanesulfonic Acid
LD50 rat: 649 mg/kg
- Acetic Acid
LD50 rat: 3,310 mg/kg

Components

- Acute dermal toxicity : Heteropolycyclic-alkanol, carbomonocycle-alkanesulfonate
LD50 rat: > 2,000 mg/kg
Test substance: Information given is based on data obtained from similar substances.
- Methanesulfonic Acid
LD50 rabbit: > 1,000 mg/kg

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Acetic Acid
LD50 rabbit: 1,060 mg/kg

Potential Health Effects

- Eyes : Causes serious eye damage.
- Skin : Causes severe skin burns. May cause allergic skin reaction.
- Ingestion : Causes digestive tract burns.
- Inhalation : May cause nose, throat, and lung irritation.
- Chronic Exposure : Health injuries are not known or expected under normal use.

Experience with human exposure

- Eye contact : Redness, Pain, Corrosion
- Skin contact : Redness, Pain, Irritation, Corrosion, Allergic reactions
- Ingestion : Corrosion, Abdominal pain
- Inhalation : Respiratory irritation, Cough
- Further information** : no data available

Section: 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Product

- Environmental Effects : This product has no known ecotoxicological effects.
- Toxicity to fish : 96 hrs LC50 Fathead Minnow: 502 mg/l
Test substance: Similar Product
GLP: No
- 96 hrs NOEC Fathead Minnow: 360 mg/l
Test substance: Similar Product
GLP: No
- 96 hrs LC50 Rainbow Trout: 480 mg/l
Test substance: Similar Product
GLP: No
- 96 hrs NOEC Rainbow Trout: 360 mg/l
Test substance: Similar Product
GLP: No
- Toxicity to daphnia and other aquatic invertebrates : 48 hrs EC50 Ceriodaphnia dubia: 301 mg/l
Test substance: Similar Product
GLP: No

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	48 hrs LC50 Ceriodaphnia dubia: 369 mg/l Test substance: Similar Product GLP: No
	48 hrs NOEC Ceriodaphnia dubia: 216 mg/l Test substance: Similar Product GLP: No
	48 h EC50 Daphnia magna Straus: 400 mg/l
Toxicity to algae	: 48 hrs NOEC Macrocyctis pyrifera (brown algae): 25 mg/l Test substance: Similar Product Test Type: Reproduction GLP: No
	48 hrs EC50 Macrocyctis pyrifera (brown algae): 104 mg/l Test substance: Similar Product Test Type: Reproduction GLP: No
	48 hrs EC25 / IC25 Macrocyctis pyrifera (brown algae): 74.5 mg/l Test substance: Similar Product Test Type: Reproduction GLP: No
	48 hrs NOEC Macrocyctis pyrifera (brown algae): 25 mg/l Test substance: Similar Product Test Type: Growth GLP: No
	48 hrs EC50 Macrocyctis pyrifera (brown algae): 119 mg/l Test substance: Similar Product Test Type: Growth GLP: No
	48 hrs EC25 / IC25 Macrocyctis pyrifera (brown algae): 67.6 mg/l Test substance: Similar Product Test Type: Growth GLP: No
	48 h ErC50 Desmodesmus subspicatus (green algae): 1,000 mg/l Test Type: Growth inhibition
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: 7 d EC25 / IC25 Ceriodaphnia dubia: 66 mg/l Test substance: Similar Product Test Type: Reproduction GLP: No
	7 d LOEC Ceriodaphnia dubia: 90 mg/l Test substance: Similar Product Test Type: Reproduction GLP: No

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7 d NOEC Ceriodaphnia dubia: 45 mg/l
Test substance: Similar Product
Test Type: Reproduction
GLP: No

Components

Toxicity to fish : Heteropolycyclic-alkanol, carbomonocycle-alkanesulfonate
96 h LC50 Oncorhynchus mykiss (rainbow trout): > 47 mg/l
Test substance: Information given is based on data obtained from similar substances.

Acetic Acid
96 h LC50 Oncorhynchus mykiss (rainbow trout): > 1,000 mg/l

Components

Toxicity to daphnia and other aquatic invertebrates : Heteropolycyclic-alkanol, carbomonocycle-alkanesulfonate
48 h EC50 Daphnia magna (Water flea): 41 mg/l
Test substance: Information given is based on data obtained from similar substances.

Methanesulfonic Acid
48 h EC50 Daphnia: 70 mg/l

Acetic Acid
48 h EC50 Daphnia magna (Water flea): 39.6 mg/l

Components

Toxicity to algae : Heteropolycyclic-alkanol, carbomonocycle-alkanesulfonate
72 h EC50 Pseudokirchneriella subcapitata (green algae): 30 mg/l
Test substance: Information given is based on data obtained from similar substances.

Acetic Acid
72 h EC50 Skeletonema costatum (marine diatom): > 1,000 mg/l

12.2 Persistence and degradability

Product

Chemical Oxygen Demand (COD): 610,000 mg/l (Product)

Components

Biodegradability : Heteropolycyclic-alkanol, carbomonocycle-alkanesulfonate
Result: Biodegradable

Methanesulfonic Acid
Result: Readily biodegradable.

Acetic Acid

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Result: Readily biodegradable.

12.3 Bioaccumulative potential

Product

Bioaccumulation : No bioaccumulation is to be expected (log Pow <= 4).

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

Product

Assessment : 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.

12.6 Other adverse effects

no data available

Section: 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with the European Directives on waste and hazardous waste. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

13.1 Waste treatment methods

- Product : Where possible recycling is preferred to disposal or incineration.
If recycling is not practicable, dispose of in compliance with local regulations.
Dispose of wastes in an approved waste disposal facility.
- Contaminated packaging : Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.
- Guidance for Waste Code selection : Organic wastes containing dangerous substances. If this product is used in any further processes, the final user must redefine and assign the most appropriate European Waste Catalogue Code. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable European (EU Directive 2008/98/EC) and local regulations.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

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Land transport (ADR/ADN/RID)

14.1 UN number: UN 1760
14.2 UN proper shipping name: CORROSIVE LIQUID, N.O.S. (Organic Sulfonic Acid, Acetic Acid)
14.3 Transport hazard class(es): 8
14.4 Packing group: III
14.5 Environmental hazards: No
14.6 Special precautions for user: Not applicable.

Air transport (IATA)

14.1 UN number: UN 1760
14.2 UN proper shipping name: CORROSIVE LIQUID, N.O.S. (Organic Sulfonic Acid, Acetic Acid)
14.3 Transport hazard class(es): 8
14.4 Packing group: III
14.5 Environmental hazards: No
14.6 Special precautions for user: Not applicable.

Sea transport (IMDG/IMO)

14.1 UN number: UN 1760
14.2 UN proper shipping name: CORROSIVE LIQUID, N.O.S. (Organic Sulfonic Acid, Acetic Acid)
14.3 Transport hazard class(es): 8
14.4 Packing group: III
14.5 Environmental hazards: No
14.6 Special precautions for user: Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.

Section: 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Seveso III: Directive : Not applicable.
2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

INTERNATIONAL CHEMICAL CONTROL LAWS

CANADA

This product contains substance(s) which are not listed on the Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL).

United States TSCA Inventory

On or in compliance with the active portion of the TSCA inventory

NATIONAL REGULATIONS GERMANY

Water contaminating class : WGK 1
(Germany) Classification according to AwSV, Annex 1

3D TRASAR™ 3DT398**15.2 Chemical Safety Assessment:**

No Chemical Safety Assessment has been carried out on the product.

Section: 16. OTHER INFORMATION**Procedure used to derive the classification according to REGULATION (EC) No 1272/2008**

Classification	Justification
Skin corrosion 1, H314	Based on product data or assessment
Serious eye damage 1, H318	Based on product data or assessment
Skin sensitization 1, H317	Calculation method

Full text of H-Statements

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H412	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; 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; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Safety Data Sheet : IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

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The possible key literature references and data sources which may have been used in conjunction with the consideration of expert judgment to compile this Safety Data Sheet: European regulations/directives (including (EC) No. 1907/2006, (EC) No. 1272/2008), supplier data, inter-net, ESIS, IUCLID, ERICards, Non European official regulatory data and other data sources.

Prepared By : Regulatory Affairs

Numbers quoted in the MSDS are given in the format: 1,000,000 = 1 million and 1,000 = 1 thousand. 0.1 = 1 tenth and 0.001 = 1 thousandth

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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.