SAFETY DATA SHEET

DEQUEST® 7000

Section 1. Identification

Product identifier	:	DEQUEST® 7000
Chemical name	:	DEQUEST® 7000
Other means of identification	:	DEQUEST® 7000
Product type	:	liquid

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

Uses advised against		
Reason	:	The supplier has no experience or data on this use.

Supplier's details	:	Italmatch UK Ltd. Corporation Road, Newport, South Wales, United Kingdom NP19 4XF (00)44 (0)1633 75 4200 Monday - Friday (9.00 - 17.00)
Emergency telephone number (with hours of operation)	:	For Chemical Emergency Spill, Leak, Fire, Exposure or Accident Call CHEMTREC Day or Night: National contact +1-800-424-9300 International Emergency Telephone number: +1-703-527-3887 (call collect)

Section 2. Hazards identification

OSHA/HCS status	:	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	:	CORROSIVE TO METALS - Category 1

GHS label elements

Hazard pictograms :

Signal word : Warning
Hazard statements : May be corrosive to metals.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Prevention : Keep only in original container.
Response : Absorb spillage to prevent material damage.
Storage : Store in corrosive resistant container with a resistant inner liner.
Disposal : Not applicable.

Supplemental label elements : Not applicable.

Hazards not otherwise classified : Exposure to decomposition products may cause a health hazard.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture
Chemical name : DEQUEST® 7000
Other means of identification : DEQUEST® 7000

CAS number/other identifiers

Product code : 18314, 42486, 42485, 42484, 42482, 42473, 42287, 42277, 18044, 18022

Ingredient name	%	CAS number
1,2,4-Butanetricarboxylic acid, 2-phosphono-	>= 49 - <= 51	37971-36-1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.
There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.
Occupational exposure limits, if available, are listed in section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give

mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Exposure to decomposition products may cause a health hazard.

Skin contact : No known significant effects or critical hazards.

Ingestion : May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
irritation
watering
redness

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : Adverse symptoms may include the following:
stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO2, water spray (fog) or foam.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
phosphorus oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Remark : Non-flammable.

Remark : Not applicable.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

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. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble,

absorb with an inert dry material and place in an appropriate waste disposal container. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Absorb spillage to prevent material damage. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Store in corrosive resistant container with a resistant inner liner. Separate from alkalis. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Storage temperature : Do not store below the following temperature: -10 °C

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits
None.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state	:	liquid [liquid]
Color	:	Colorless.
Odor	:	Characteristic.
Odor threshold	:	Not applicable.
pH	:	2.0 [Conc. (% w/w): 1 g/l]
Melting point	:	-15 °C (5 °F) Decomposition temperature: 100 °C (212 °F)
Boiling point	:	> 100 °C (> 212 °F)
Flash point	:	> 100 °C (> 212 °F)
Fire point	:	Not available.
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Non-flammable.
Lower and upper explosive (flammable) limits	:	**Lower:** Not available. **Upper:** Not applicable.
Vapor pressure	:	19.6 hPa @ 20 °C (68 °F)
Vapor density	:	Not available.
Relative density	:	1.27 - 1.3 @ 20 °C (68 °F)
Solubility	:	Miscible in water.
Partition coefficient: n-octanol/water	:	-1.36
Auto-ignition temperature	:	> 500 °C (> 932 °F)
Decomposition temperature	:	100 °C (212 °F)
Viscosity	:	**Dynamic:** 10 - 25 mPa.s **Kinematic:** 1.28 mm2/s
Burning time	:	Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : Reactive or incompatible with the following materials:
alkalis
metals

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced., May release dangerous gases (PHOSPHINE) under certain conditions.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
DEQUEST® 7000				
	LD50 Oral	Rat	> 2,000 mg/kg	-
	LD50 Dermal	Rabbit	> 2,000 mg/kg	-

Conclusion/Summary : Conclusive but not sufficient for classification.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
DEQUEST® 7000	Eyes - Edema of the conjunctivae 405 Acute Eye Irritation/Corrosion	Rabbit	1	24 hrs	-
	Eyes - Iris lesion 405 Acute Eye Irritation/Corrosion	Rabbit	0	24 hrs	-
	Eyes - Cornea opacity 405 Acute Eye Irritation/Corrosion	Rabbit	0	72 hrs	-
	Skin - Edema 404 Acute Dermal Irritation/Corrosion	Rabbit	0	24 hrs	-
	Skin - Erythema/Eschar 404	Rabbit	0	24 hrs	-

	Acute Dermal Irritation/Corrosion				

Conclusion/Summary

Skin : Non-irritating to the skin.

Eyes : Non-irritating to the eyes.

Respiratory : No known significant effects or critical hazards.

Sensitization

Conclusion/Summary

Skin : No known significant effects or critical hazards.

Respiratory : No known significant effects or critical hazards.

Mutagenicity

Product/ingredient name	Test	Experiment	Result
DEQUEST® 7000	471 Bacterial Reverse Mutation Test	Subject: Bacteria Metabolic activation: W - W/O metabolic activation Experiment: In vitro	Negative

Conclusion/Summary : Not mutagenic in a standard battery of genetic toxicological tests.

Carcinogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
DEQUEST® 7000	Negative	Negative	Negative	Rat - Female	Oral: 1000 mg/kg	-

Conclusion/Summary : Conclusive but not sufficient for classification.

Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
DEQUEST® 7000	Negative - Oral	Rat - Female	1,000 mg/kg	10 days

Conclusion/Summary : Conclusive but not sufficient for classification.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard
Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
Inhalation : Exposure to decomposition products may cause a health hazard.
Skin contact : No known significant effects or critical hazards.
Ingestion : May cause burns to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
irritation
watering
redness
Inhalation : No specific data.
Skin contact : No specific data.
Ingestion : Adverse symptoms may include the following:
stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary : No known significant effects or critical hazards.

General : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Other information : Not applicable.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
DEQUEST® 7000			
	Acute LC50 > 3,440 mg/l Fresh water	Rainbow trout,donaldson trout	48 h
	Acute LC50 > 500 mg/l Fresh water	Fish	48 h
	Acute LC50 > 1,042 mg/l Fresh water 203 Fish, Acute Toxicity Test	Zebra danio	96 h
	Acute EC50 > 1,071 mg/l Fresh water 202 Daphnia sp. Acute Immobilization Test and Reproduction Test	Daphnia magna	48 h
Remarks - Acute - Aquatic invertebrates.:	Conclusive but not sufficient for classification.		
	Acute EC50 265 mg/l Fresh water	Daphnia magna	24 h
	Acute IC50 140 mg/l	Scenedesmus subspicatus	72 h
	Acute EC50 860 mg/l	Algae	96 h
	Acute IC50 > 1,081 mg/l 201 Alga, Growth Inhibition Test	Scenedesmus subspicatus	72 h

Conclusion/Summary : Conclusive but not sufficient for classification.

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
DEQUEST® 7000	302B Inherent Biodegradability: Zahn-Wellens/EMPA Test	17 % - 28 d	-	-
	302A Inherent Biodegradability: Modified SCAS Test	30 - 40 % - 28 d	-	-
	301E Ready	0 % - 28 d	-	-

	Biodegradability - Modified OECD Screening Test			

Conclusion/Summary : Not readily biodegradable.

Conclusion/Summary : Conclusive but not sufficient for classification.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
DEQUEST® 7000	-1.36	-	low

Mobility in soil

Soil/water partition coefficient (KOC) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA

UN number	3265	3265	3265	3265	3265	3265
UN proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (1,2,4-Butanetricarboxylic acid, 2-phosphono-)	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (1,2,4-Butanetricarboxylic acid, 2-phosphono-)	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (1,2,4-Butanetricarboxylic acid, 2-phosphono-)	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (1,2,4-Butanetricarboxylic acid, 2-phosphono-)	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (1,2,4-Butanetricarboxylic acid, 2-phosphono-)	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (1,2,4-Butanetricarboxylic acid, 2-phosphono-)
Transport hazard class(es)	8 	8 	8 	8 	8 	8 
Packing group	III	III	III	III	III	III
Environmental hazards	No.	No.	No.	No.	No.	No.
Additional information	-	-	-	**Hazard identification number:** 80 **Tunnel code:** E	**Emergency schedules (EmS):** F-A, S-B	-

Special precautions for user : Not applicable.

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

Proper shipping name : Not applicable

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) IUR:** Not determined

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Reactive

Composition/information on ingredients

Name	%	Classification

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

California Prop. 65
Not available.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Chemical Weapons Convention List Schedule I Chemicals
None of the components are listed.

Chemical Weapons Convention List Schedule II Chemicals
None of the components are listed.

Chemical Weapons Convention List Schedule III Chemicals
None of the components are listed.

Montreal Protocol (Annexes A, B, C, E)
None of the components are listed.

Stockholm Convention on Persistent Organic Pollutants

Annex A - Elimination - Production
None of the components are listed.

Annex A - Elimination - Use
None of the components are listed.

Annex B - Restriction - Production
None of the components are listed.

Annex B - Restriction - Use
None of the components are listed.

Annex C - Unintentional - Production
None of the components are listed.

Rotterdam Convention on Prior Inform Consent (PIC)
None of the components are listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Heavy metals - Annex 1
None of the components are listed.

POPs - Annex 1 - Production
None of the components are listed.

POPs - Annex 1 - Use
None of the components are listed.

POPs - Annex 2
None of the components are listed.

POPs - Annex 3
None of the components are listed.

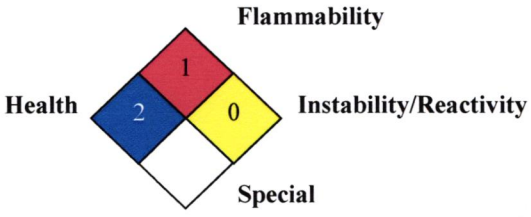
Inventory list

Australia	:	All components are listed or exempted.
Canada	:	All components are listed or exempted.
China	:	All components are listed or exempted.
Europe	:	All components are listed or exempted.
Japan	:	**Japan inventory (ENCS)**: All components are listed or exempted. **Japan inventory (ISHL)**: All components are listed or exempted.
Malaysia	:	Not determined.
New Zealand	:	All components are listed or exempted.
Philippines	:	All components are listed or exempted.
Republic of Korea	:	All components are listed or exempted.
Taiwan	:	All components are listed or exempted.
Turkey	:	Not determined.

United States : All components are listed or exempted.

Section 16. Other information

National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification	Justification
CORROSIVE TO METALS - Category 1	Expert judgment

History

Date of printing : 06/18/2015
Date of issue/Date of revision : 04/16/2018
Date of previous issue : 02/03/2016
Version : 1.2
Prepared by : MALATESTAR
Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

UN = United Nations

References : Not available.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.