TRIFORCE

Material Safety Data Sheet
Lead Acid Batteries FLOODED F05

Din forhandler

GACELL®
The right battery

GACELL A/S - Sletten 17 - DK 7500 Holstebro - 961 02 961

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1. PRODUCT AND COMPANY IDENTIFICATION

Product: FLOODED Battery F05

Category: Sealed Lead Acid Battery, Non-dangerous battery, VRLA Batteries , non-spillable

Trade Name: Triforce FLOODED F05

Classification: Electic Storage Battery

Manufacturer:

Trilog Batterielogistik GmbH
Zwickauer Straße 76
D-04639 Gößnitz
Tel: +49 3763 404744-101
E-Mail: info@trilog.de

2. HAZARDS IDENTIFICATION

GHS Classification:

Health	Environmental	Physikal
Acute Toxicity – Category 4 Skin Corrosion – Category 1A Eye Damage – Category 1 Reproductive – Category 1A Carcinogenicity (lead)– Category 1B Carcinogenicity (arsenic)– Category 1A Carcinogenicity(acid mist)–Category1A Specific Target Organ Toxicity (repeated exposure) –Category 2 GHS Label: 	Aquatic Chronic – 1 Aquatic Acute – 1 	Explosive Chemical, Division 1.3 

Hazard Statements: DANGER!	Precautionary Statements
Health Causes severe skin burns and eye damage. May damage fertility or the unborn child if ingested or inhaled. May cause cancer if ingested or inhaled. Causes damage to central nervous system, blood and kidneys through prolonged or repeated exposure if ingested or inhaled. May form explosive air/gas mixture during charging. Extremely flammable gas (hydrogen). Explosive, fire, blast, or projection hazard. May cause harm to breast-fed children Harmful if swallowed, inhaled, or contact with skin. Causes skin irritation, serious eye damage.	**Prevention** Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing, eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Contact with internal components may cause irritation or severe burns. Avoid contact with internal acid/gel. Irritating to eyes, respiratory system, and skin. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood Avoid contact during pregnancy/while nursing. Keep away from heat./sparks/open flames/hot surfaces. No smoking
Other Hazards	
Mechanical	VRLA Batteries can be heavy. Correct manual handling techniques and/or mechanical lifting aides (e.g. Fork Lift Truck) must be used.
Electrical	VRLA Batteries can contain large amounts of electrical energy which can give very high discharge currents and severe electrical shock if the terminals are short circuited.
Chemical	The VRLA Battery presents no chemical hazards during the normal operation provided the recommendations for handling, storage, transport and usage are observed. VRLA Batteries emit hydrogen gas which is highly flammable and will form explosive mixtures in air from approx. 4% to 76%. This can be ignited by a spark at any voltage, naked flames or other sources of ignition. If the battery is broken and the internal components exposed, hazards may exist which require careful attention.

3. HAZARDOUS INGREDIENTS/ IDENTITY INFORMATION

Components	Approx % by Wt.	CAS Number	Air Exposure Limits (g/m3)			LD50 ORAL (mg/kg)
			ACGIH TLV	OSHA	NIOSH	
INORGANIC LEAD/LEAD COMPOUNDS	60%-75%	7439-92-1	150	50	10	-
TIN	<0.5%	7440-31-5	2000	2000	-	-
CALCIUM	<0.2%	7440-70-2	-	-	-	-
ALUMINUM	<2%	7429-90-5	10000	5000	5000	-
DILUTE SULFURIC ACID	~25%	7664-93-9	1000	1000	1000	2.14
ARSENIC	<0.1%	7440-38-2	-	-	-	-
CASE MATERIAL: POLYPROPYLENE (PP)	~7%	9003-07-0	-	-	-	-

4. FIRST AID MEASURES FOR ACUTE EXPOSURE

This information is of relevance only if the VRLA Battery has suffered damage, is broken and persons have direct contact with the internal components.		
PLATE GRIDS AND ACTIVE MATERIALS	**Inhalation**	Remove the person from exposure to fresh air. Seek advice from a medical doctor.
	Ingestion	Wash out mouth with water and give plenty of water to drink. Do not induce vomiting. Seek advice from a medical doctor.
	Skin Contact	Wash off with plenty of water and soap to prevent accidental ingestion or inhalation. Seek medical advice if pain or rash does not reduce.
	Eye Contact	Immediately irrigate with eyewash solution or clean water for at least 10 minutes, holding the eyelids apart. Then take the person to hospital without further delay.
	Self-protection for the first aider	Eye protection (safety glasses or face shield), and heavy-duty gloves are required. In case of inhalation, a face mask or respirator may be required.
BATTERY ELECTROLYTE	**SPEED IS ESSENTIAL - OBTAIN IMMEDIATE MEDICAL ATTENTION**	
	Inhalation	Remove the person from exposure to fresh air. If the person continues to feel unwell seek advice from a medical doctor.
	Ingestion	Wash out mouth with water and give plenty of water to drink. Do not induce vomiting. If the person continues to feel unwell seek advice from a medical doctor.
	Skin Contact	Drench with large quantities of water. Remove contaminated clothing and place in water to dilute the acid. Continue to wash the affected area for at least 10 minutes. Seek advice from a medical doctor.
	Eye Contact	SPEED IS ESSENTIAL - OBTAIN IMMEDIATE MEDICAL ATTENTION Immediately irrigate with eyewash solution or clean water for at least 10 minutes, holding the eyelids apart. Then take the person to hospital without further delay.
	Self-protection for the first aider	Eye protection (safety glasses or face shield), and heavy-duty gloves are required. In case of inhalation, a face mask or respirator may be required.

CASE MATERIAL	**Inhalation**	Material can burn in a fire with toxic smoke and decomposition products. Upon inhalation of decomposition products, keep patient calm, remove to fresh air, and seek advice from a medical doctor. If a large quantity is inhaled take the person to hospital. Note to physician: Treat according to symptoms (decontamination, vital functions), no known specific antidote.
	Ingestion	Wash out mouth with water and give plenty of water to drink. Do not induce vomiting. If the person continues to feel unwell seek advice from a medical doctor.
	Skin Contact	Areas affected by molten material should be quickly placed under cold running water and a sterile protective dressing applied. Seek advice from a medical doctor.
	Eye Contact	May cause irritation or injury due to mechanical action and traces of Battery Electrolyte. Immediately irrigate with eyewash solution or clean water for at least 10 minutes, holding the eyelids apart. Then take the person to hospital without further delay
	Self-protection for the first aider	Eye protection (safety glasses or face shield), and disposable gloves are required. In case of inhalation, a face mask or respirator may be required.
SEPARATOR MATERIAL	**Inhalation**	Remove patient from exposure to fresh air. If irritation persists, seek advice from a medical doctor.
	Ingestion	Wash out mouth with water and give plenty of water to drink. Do not induce vomiting. If the person continues to feel unwell seek advice from a medical doctor.
	Skin Contact	After contact with skin, wash immediately with plenty of soap and water. If irritation persists, seek advice from a medical doctor.
	Eye Contact	May cause irritation or injury due to mechanical action and traces of Battery Electrolyte. Immediately irrigate with eyewash solution or clean water for at least 10 minutes, holding the eyelids apart. Then take the person to hospital without further delay
	Self-protection for the first aider	Eye protection (safety glasses or face shield), and disposable gloves are required. In case of inhalation, a face mask or respirator may be required.

5. FIRE-FIGHTING AND EXPLOSION HAZARD MEASURES

VRLA BATTERIES	FLASH POINT: N/A	Remove the person from exposure to fresh air. Seek advice from a medical doctor.
	GENERAL INFORMATION: EXPLOSION HAZARD 	VRLA Batteries emit hydrogen gas which is highly flammable and will form explosive mixtures in air from approx. 4% to 76%. This can be ignited by a spark at any voltage, naked flames or other sources of ignition. Batteries in use will be part of an electrical circuit and must be isolated from the power source before attempting to put out a fire. Switch the power OFF before disconnecting the batteries from the power source. Damaged batteries may expose negative plates, grey in colour, which may ignite if allowed to dry out. These plates may be wetted down with water after the battery has been removed from all electrical circuits.
	SUITABLE EXTINGUISHER TYPES	CO_2; Foam; Dry Powder.
	UNSUITABLE EXTINGUISHER TYPES	Water extinguishers must never be used to put out an electrical fire.
	HAZARDOUS COMBUSTION & DECOMPOSITION PRODUCTS	Carbon monoxide, Sulphur Dioxide, Sulphur Trioxide, Lead fume and vapour, toxic fumes from decomposition of battery case materials.
	ADVICE FOR FIRE-FIGHTERS	Full face visor or safety goggles; Respiratory equipment or self-contained breathing apparatus (SCBA); Full acid resistant protective clothing must be worn in fire-fighting conditions.

6. ACCIDENTAL RELEASE MEASURES

THIS INFORMATION IS OF RELEVANCE ONLY IF THE VRLA BATTERY HAS SUFFERED DAMAGE AND IS BROKEN.		
VRLA BATTERIES		VRLA batteries are designed to be safe to handle and not to leak battery electrolyte under normal conditions. In case of accidental damage heavy-duty gloves are required to pick-up the battery to protect against unseen electrolyte leakage.
PLATE GRIDS AND ACTIVE MATERIALS	PERSONAL PRECAUTIONS	Eye protection (safety glasses or face shield), and heavy-duty gloves are required. If the material is wet, a face mask or respirator is not required If the material is dry, a face mask or respirator is required.
	CLEAN-UP METHODS	Large, solid pieces may be picked up and bagged for recycling. Never use a brush to sweep up debris; it may create Lead-dust in the air. Wet clean the spill area to remove all traces of debris. Battery debris and cleaning materials must be collected and placed in an inert sealed container (e.g. self-seal plastic bag or bucket) for disposal.
	ENVIRONMENTAL PRECAUTIONS	Do not allow material to enter a watercourse. Exposed Lead materials must be placed in an inert sealed container (e.g. self-seal plastic bag or bucket) for disposal.
BATTERY ELECTROLYTE	PERSONAL PRECAUTIO	Ensure suitable, acid resistant personal protective clothing (including heavy-duty gloves, safety glasses and respiratory protection) is worn during removal and clean-up of spillages.
	CLEAN-UP METHODS: SMALL SPILLAGES	Neutralise and absorb the spillage using soda ash, sodium bicarbonate (available from supermarkets), sodium carbonate or calcium carbonate powder. Wet clean the spill area to remove all traces of debris. Battery debris and cleaning materials must be collected and placed in an inert sealed container (e.g. self-seal plastic bag or bucket) for disposal.
	CLEAN-UP METHODS: LARGE SPILLAGES	Large amounts of electrolyte spillage are unlikely with VRLA batteries since the electrolyte is fully absorbed in the active materials and separator. Bund the spillage area using dry sand, earth, sawdust or other inert material. Neutralise the electrolyte using soda ash, sodium bicarbonate (available from supermarkets), sodium carbonate or calcium carbonate powder. Wet clean the spill area to remove all traces of debris and electrolyte. Cleaning materials must be collected and placed in an inert sealed container (e.g. self-seal plastic bag or bucket) for disposal.
	ENVIRONMENTAL PRECAUTIONS	Battery electrolyte must not be allowed to enter any drains or sewage system or water course.
CASE MATERIAL	CLEAN-UP METHODS	Assume battery case material is contaminated and proceed as for Plate Grids and Active Materials above.
SEPARATOR MATERIAL	CLEAN-UP METHODS	Assume battery case material is contaminated and proceed as for Plate Grids and Active Materials above.

7. HANDLING AND STORAGE

Handling: Unless involved in recycling operations, do not breach the casing or empty the contents of the battery. Handle carefully and avoid tipping, which may allow electrolyte leakage. There may be increasing risk of electric shock from strings of connected batteries.

Keep containers tightly closed when not in use. If battery case is broken, avoid contact with internal components.

Keep vent caps on and cover terminals to prevent short circuits. Place cardboard between layers of stacked automotive batteries to avoid damage and short circuits.

Keep away from combustible materials, organic chemicals, reducing substances, metals, strong oxidizers and water. Use banding or stretch wrap to secure items for shipping.

Storage: Store batteries in cool, dry, well-ventilated areas with impervious surfaces and adequate containment in the event of spills. Batteries should also be stored under roof for protection against adverse weather conditions. Separate from incompatible materials. Store and handle only in areas with adequate water supply and spill control. Avoid damage to containers. Keep away from fire, sparks and heat. Keep away from metallic objects could bridge the terminals on a battery and create a dangerous short-circuit.

Charging: There is a possible risk of electric shock from charging equipment and from strings of series connected batteries, whether or not being charged. Shut-off power to chargers whenever not in use and before detachment of any circuit connections. Batteries being charged will generate and release flammable hydrogen gas.

Charging space should be ventilated. Keep battery vent caps in position. Prohibit smoking and avoid creation of flames and sparks nearby.

Wear face and eye protection when near batteries being charged.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

VRLA Battery:

CONTROL PARAMETERS: There are no special control parameters for the handling, storage, installation of VRLA Batteries. VRLA Batteries emit hydrogen gas which is highly flammable and will form explosive mixtures in air from approximately 4% to 76%. Never install VLRA Batteries in a gastight enclosure during storage, transport or usage.

EXPOSURE CONTORL: There are no special exposure controls for the handling, storage, installation or use of VRLA Batteries.

LPERSONAL PROTECTION**:** When there is no evidence of damage or visible traces of liquid (electrolyte) or solid deposits on the batteries they may be handled safely without extra personal protective equipment.

Ensure electrical insulation equipment is used when installing batteries. (e.g. insulated mats and covers; insulated tools)

Remove ALL metallic objects from the person when working with VRLA Batteries: e.g. Jewellery (rings, watches, bracelets, necklaces), pens, torches, etc.

Where there are signs of damage or liquid (electrolyte) or solid deposits, rubber gloves and acid resistant clothing must be worn when handling the batteries and affected packaging to protect against the effects of any electrolyte that may be present.

If it is suspected that free electrolyte is present, then safety glasses must be worn, and if large amounts are present, chemical goggles or face shield should be used.

UL CAUTIONARY STATEMENT: "Warning: Risk of fire, explosion, or burns. Do not disassemble; heat above 50°C; or incinerate".

9. PHYSICAL AND CHEMICAL PROPERTIES

VRLA Battery: The main components are listed in SECTION 2 above

The undamaged product is a manufactured article in an inert plastic (ABS) case, which will burn if subjected to high temperatures or sources of ignition. Some battery types are made with Flame Retardant ABS cases, see technical specification. These batteries carry the suffix 'FR' after the battery type.

The information below refers to the physical and chemical properties of the main VRLA Battery components and substances. This information is published for reference only.

PLATE GRIDS AND ACTIVE MATERIALS	Appearance		Safety-related data	
	Form	Solid	Solidification point	327 °C
	Colour	Grey or brown	Boiling point	1740 °C
	Odour	Odourless	Solubility in water	Very low (0.15mg/l)
			Solubility in acid or alkaline solutions	Yes, dependant on the strength of solution
			Density (at 20 °C)	11.35 g/cm3
			Vapour pressure (at 20 °C)	Undetectable
BATTERY ELECTROLYTE	Form	Liquid	Solidification point	-35 to -60 °C
	Colour	Colourless	Boiling point	Approx. 108 to 114 °C
	Odour	Odourless	Solubility in water	Complete
			Density (at 20 °C)	Variable up to 1.350 g/cm3
			Vapour pressure (at 20 °C)	10-20 mmHg
CASE MATERIAL	Appearance			
	Form	Solid	Softening point	> 100 °C
	Colour	Grey or brown	Flash Point	>330 °C
	Odour	Slight Odour	Solubility in water	Insoluble
			Solubility in other solvents	Soluble in polar solvents, aromatic solvents, chlorinated hydrocarbon
			Density (at 20 °C)	1.07-1.4 g/cm3
			Vapour pressure (at 20 °C)	Undetectable

SEPARATOR MATERIAL	Form	Fibrous material	Solidification point	820 °C
	Colour	White	Boiling point	>2500 °C
	Odour	Odourless	Solubility in water	Insoluble
			Density (at 20 °C)	2.23g/cm3
			Vapour pressure (at 20 °C)	Undetectable

10. STABILITY AND REACTIVITY

VRLA BATTERY	Stability	Within the operational temperature range -20 to +50 °C the undamaged product is stable
PLATE GRIDS AND ACTIVE MATERIALS	Materials & Conditions to Avoid	Powdered Lead reacts violently with fused ammonium nitrate and sodium acetylide. Reacts violently when in contact with chlorine trifluoride.
BATTERY ELECTROLYTE	Possibility of Hazardous Reactions	Dilution of the higher concentrated grades with water may liberate excessive heat. Highly reactive with metals and organic materials. On contact with metals, may generate hydrogen which forms explosive mixtures with air. Destroys organic materials such as cardboard, wood, textiles, etc.
	Hazardous Decomposition Product(s)	Sulphur oxides
CASE MATERIAL	Materials & Conditions to Avoid	To avoid thermal decomposition, do not overheat. Starts to decompose at temperatures >275 °C Powerful oxidising agents.
	Hazardous decomposition products	Monomers, other degradation products, traces of hydrogen cyanide.
SEPARATOR MATERIAL	Stability	Stable material.
	Materials & Conditions to Avoid	Incompatible with Hydrofluoric acid and concentrated Sodium Hydroxide.
	Hazardous decomposition products	No hazardous polymerisation expected.

11. TOXICOLOGICAL INFORMATION

This information is of relevance only if the VRLA Battery has suffered damage and is broken.		
VRLA BATTERY		This information does not apply to the undamaged VRLA Battery. It is of relevance if the battery is broken and the components are released to the environment. Exposure limits may vary according to national law and regulations.
PLATE GRIDS: METALLIC LEAD, LEAD ALLOYS	Acute Toxicity 	Toxic by ingestion or inhalation Chronic poison Lead is a poison that affects virtually every system in the body Symptoms include fatigue, headaches, constipation, aching bones and muscles, gastrointestinal tract disturbances and reduced appetite.
ACTIVE MATERIALS: LEAD DIOXIDE	Acute Toxicity 	Toxic by ingestion or inhalation Chronic exposure to Lead compounds may lead to a build-up of Lead in the body, giving rise to a variety of health problems, including anaemia, kidney and liver damage, impaired eye-sight, memory loss and CNS2 damage

Battery Electrolyte	Corrosive 	Corrosive, the more concentrated solutions can cause serious burns to the mouth, eyes and skin Harmful by ingestion and through skin contact
	Inhalation 	Mist is a severe irritant to the respiratory tract. Fluid build-up on the lung (pulmonary oedema) may occur up to 48 hours after exposure and could prove fatal
	Ingestion 	Will immediately cause severe corrosion of and damage to the gastrointestinal tract
	Skin Contact 	Causes severe chemical burns
	Eye Contact 	Risk of serious damage to eyes. Causes severe burns. May cause prolonged or permanent damage or even total loss of sight. Mist will cause irritation
CASE MATERIAL		According to information available the product is not harmful to health provided it is correctly handled and processed according to the given recommendations.
SEPARATOR MATERIAL		Based on animal implantation and epidemiologic studies glass microfibers are thought to have some limited carcinogenic potential and as such are designated as Group 2B materials (IARC, US). The material should be treated as a category 3 carcinogen (Europe). Limited evidence of carcinogenic effect.

12. ECOLOGICAL INFORMATION

This information is of relevance only if the VRLA Battery has suffered damage and is broken.		
VRLA BATTERY		This information does not apply to the undamaged VRLA Battery. It is of relevance if the battery is broken and the components are released to the environment.
PLATE GRIDS AND ACTIVE MATERIALS	Metallic Lead, Lead alloys and Lead dioxide 	Chemical and physical treatment is required for the elimination of Lead from water. Waste water containing Lead must not be disposed of in an untreated condition.
	Ecotoxicity 	Lead metal in massive form is not classified as hazardous to the aquatic environment, due to its low solubility and rapid removal from the water column. Inorganic lead compounds are considered to be acutely toxic in the environment and also to present a longterm hazard to aquatic organisms.

	Effect in the aquatic environment 	Toxicity for fish: 96 h LC 50 > 100 mg/l Toxicity for daphnia: 48 h EC 50 > 100 mg/l Toxicity for alga: 72 h IC 50 > 10 mg/l
Battery Electrolyte	Ecotoxicity 	In order to avoid damage to the sewerage system, the acid has to be neutralised by means of soda ash, sodium bicarbonate or sodium carbonate before disposal. Ecological damage is possible by change of pH. The electrolyte solution reacts with water and organic substances, causing damage to flora and fauna. The electrolyte may also contain components of Lead that can be toxic to aquatic environments
	Persistence and Degradation	Remains indefinitely in the environment as sulphate
CASE MATERIAL	Elimination information:	No data available: insoluble in water
	Behaviour and environmental fate	Due to the consistency of the product, and its insolubility in water, it will apparently not be bio-available
SEPARATOR MATERIAL		No data available: insoluble in water Not thought to pose any risk to the environment.

13. DISPOSAL INFORMATION (UNITED STATES)

This information is of relevance only if the VRLA Battery has suffered damage and is broken.		
VRLA BATTERY	EUROPE	Spent (used) VRLA Batteries are subject to the requirements of the Batteries Directive 2006/66/EC on batteries and accumulators and waste batteries and accumulators. Spent (used) VRLA Batteries MUST be sent for recycling through an authorised contractor at the end-of-life.Exposure limits may vary according to national law and regulations. The WEEE Directive 2002/96/EC (Waste Electrical and Electronic Equipment) applies. Spent (used) VRLA Batteries MUST be removed from electrical and electronic equipment at the end-of-life.
	WORLDWIDE	VRLA batteries contain inorganic Lead compounds and Sulphuric Acid which are damaging to the environment. Spent (used) batteries must be disposed of in an environmentally friendly manner in accordance with local national laws and regulations. VRLA batteries must not be dismantled, burnt or incinerated as a means of disposal. At the end of life VRLA batteries may still be electrically 'live' and contain a large amount of electrical energy. The same care and attention to safe handling should be taken as when handling new batteries. Particular care must be taken to avoid short-circuiting the battery terminals.
PLATE GRIDS AND ACTIVE MATERIALS	EUROPE WORLDWIDE	Metallic Lead and active materials (Lead Oxides) must be recycled. Disposal must be carried out in accordance with the European Hazardous Waste Directive 2008/98/EC.
BATTERY ELECTROLYTE	EUROPE	Disposal must be carried out in accordance with the European Hazardous Waste Directive 2008/98/EC on the protection of the environment through criminal law.
	WORLDWIDE	Disposal should be in accordance with local, state or national legislation.
	GENERAL	Battery electrolyte is dilute Sulphuric Acid, the strength of which depends on the state of charge of the batteries. It must be neutralised before disposal. See SECTION 6 for clean-up and disposal advice.

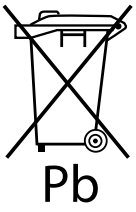
CASE MATERIAL		Do not dispose of this product into sewers, any ocean or water course in order to prevent marine animals and birds from ingesting. Recycling is encouraged. Disposal by controlled incineration or source landfill in accordance with local national laws and regulations may be acceptable.
SEPERATOR MATERIAL		Constitutes a special waste by virtue of hazardous substance content. Dispose of via approved landfill site. Disposal by controlled source landfill in accordance with local national laws and regulations may be acceptable.

14. TRANSPORT INFORMATION

Wet, non-spillable batteries do not need to be shipped and transported as fully-regulated Class 8 Corrosive hazardous materials / dangerous goods when tested, packaged and marked in accordance with the following regulations:

Proper Shipping Name	Batteris, wet, non-spillable
U.S. DOT:	Our non-spillable lead acid batteries are under the U.S. Department of Transportation's (DOT) hazardous materials regulations but are excepted from these regulations since they meet all of the following requirements found at 49 CFR 173.159(f) and 49 CFR 173.159a. The batteries are excepted from regulation if they have been tested in accordance with the vibration and pressure differential tests found in 49 CFR 173.159(f) and "rupture test" found at 49 CFR 173.159a. When offered for transport, the batteries must be protected against short circuits and securely packaged in accordance with 49 CFR 173.159a; and The batteries and outer packaging must be marked NON-SPILLABLE BATTERY or NON-SPILLABLE as required by 49 CFR 173.159a.
ADR / RID	Land Transport: Not applicable
IATA DANGEROUS GOODS REGULATIONS DGR	Excepted from the dangerous goods regulations because the batteries meet the requirements of Packing Instruction 872 and Special Provisions A67 of the International Air Transportation Association (IATA 65th version) Dangerous goods Regulationsand International Civil Aviation Organization (ICAO) Technical Instructions.Battery Terminals must be protected against short circuits. The words "NOT RESTRICTED", SPECIAL PROVISION A67" must be provided on an airway bill when air waybill is issued.
IMDG	Excepted from the dangerous goods regulations for transport by sea because thembatteries meet the requirements of Special Provision 238 of the International Maritime Dangerous Goods (IMDG CODE). Battery terminals must be protected against short circuits.
IMO	Non-Hazardous for Sea Transport: Non-hazardous for sea transport.
If the regulations listed above are not met, then Batteries, wet, nonspillable (UN2800) are regulated as Class 8 Corrosive hazardous materials / dangerous goods by the U.S. Department of Transportation (DOT) and international dangerous goods regulatory authorities pursuant to the IATA Dangerous Goods Regulations and IMDG Code.	

15. REGULATORY INFORMATION

VRLA BATTERY	**Required Markings**	
EUROPE		Crossed-out wheeled bin indicating "SEPARATE COLLECTION" for all batteries and accumulators. Not to be disposed of with general domestic, commercial or industrial waste. Ref: The Batteries Directive 2006/66/EC
EUROPE	Pb	The Pb symbol indicates the heavy metal content of the battery and enables the Lead-Acid battery to be sorted for recycling. Ref: The Batteries Directive 2006/66/EC.
WORLDWIDE		The International Recycling Symbol, required by law in many countries world-wide to facilitate the identification of secondary batteries and accumulators for recycling. Ref: IEC 61429 : 1995, Marking of secondary cells and batteries with the International Recycling Symbol ISO 7000-1135

U.S-	Proposition 65	Warning: Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Batteries also contain other chemicals known to the State of California to cause cancer. Wash hands after handling.
EUROPE	EC Directives	Directive 2006/66/EC, on batteries and accumulators and waste batteries and accumulators. Paragraph (Recital) 29 states: "Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment does not apply to batteries and accumulators used in electrical and electronic equipment."

GERMANY

VwVwS Annex reference: Water hazard class (WGK) 2, hazard to waters (Classification according to VwVwS, Annex 4).

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

NETHERLANDS

SZW-lijst van kankerverwekkende stoffen**:** None of the components are listed

SZW-lijst van mutagene stoffen: None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding: Lead is listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid: Lead is listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling: Lead is listed

DENMARK

Classification remarks: Emergency management guidelines for the storage of flammable liquids must be followed

Recommendations Danish Regulation: Young people below the age of 18 years are not allowed to use the product. Pregnant/ breastfeeding women working with the product must not be in direct contact with the product

US FEDERAL REGULATIONS

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D): Not regulated

CERCLA Hazardous Substance List (40 CFR 302.4): Lead (CAS 7439-92-1): Listed / Sulphuric Acid (CAS 7664-93-9): Listed.

SARA 304 Emergency release notification: Sulphuric Acid (CAS 7664-93-9): Listed

OSHA Specifically Regulated Substances (29 CFR 1910.1001- 1050): Lead (CAS 7439-92-1):
Reproductive toxicity
Central nervous system
Kidney
Blood
Acute toxicity

Superfund Amendments and Reauthorization Act of 1986 (SARA):
Hazard categories:
Immediate Hazard – No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 EXTREMELY HAZARDOUS SUBSTANCE					
Chemical name	**CAS Number**	**Reporable quantity (pounds)**	**Treshold planning quantity (pounds)**	**Threshold planning quantity, lower value (pounds)**	**Threshold planning quantity, upper value (pounds)**
Sulphuric Acid	7664-93-9	1000	1000		
SARA 311/312 Hazardous chemical				No	

SARA 313 (TRI REPORTING)		
Chemical name	**CAS Number**	**% by wt.**
Lead	7439-92-1	65 %-75 %
Sulphuric Acid	7664-93-9	~20 %

OTHER FEDERAL REGULATIONS	
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List	Lead (CAS 7439-92-1)
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)	Sulphuric Acid (CAS 7664-93-9)

Safe Drinking Water Act (SDWA)	Not regulated.
Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number	Sulphuric Acid (CAS 7664-93-9) : 6552
Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))	Sulphuric Acid (CAS 7664-93-9): 20%WV
DEA Exempt Chemical Mixtures Code Number	Sulphuric Acid (CAS 7664-93-9): 6552

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance	
Lead (CAS 7439-92-1)	Listed: October 1, 1992
Sulphuric Acid (CAS 7664-93-9)	Listed: March 14, 2003
US - California Proposition 65 - CRT: Listed date/Developmental toxin	
Lead (CAS 7439-92-1)	Listed: February 27, 1987
US - California Proposition 65 - CRT: Listed date/Female reproductive toxin	
Lead (CAS 7439-92-1)	Listed: February 27, 1987
US - California Proposition 65 - CRT: Listed date/Male reproductive toxin	
Lead (CAS 7439-92-1)	Listed: February 27, 1987
US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd.(a))	
Lead (CAS 7439-92-1)	
Tin (CAS 7440-31-5)	
Sulphuric Acid (CAS 7664-93-9)	

16. OTHER INFORMATION

HMIS®ratings Health: 0
Flammability: 1
Physical harazd: 0
Health: 0

NFPA ratings: NFPA ratings
Flammability: 1
Instability: 0

Disclaimer: The information in the sheet was written based on the best knowledge and experience currently available.

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