	KEP Elektronik	ai Alkatrészgyártó Kft. 7400 Kaposvár, Izzó utca 3. Tel.: +36-82/502-100 Fax: +36-82/	502-190
Date	2018.05.17.		Site: 1/10
Date of revisior	: 1:		Version nb: 1
	ROE	SAFETY DATA SHEET	. Se
	ACH	(According to Regulation 2015/830)	LP
SEC	TION 1: IDENTI	FICATION OF THE SUBSTANCE/MIXTURE AND OF THE	
	COMPA	ANY/UNDERTAKING	
1. 1.	Product identifier		
	Product name:	Samsung INR21700-40T; Lithium Ion Rechargable Battery Product numbers: 321001000, 321001190	
1. 2. R	elevant identified us Power tool battery pa	ses of the substance or mixture and uses advised against ack	
1. 3. D	etails of the supplier	of the safety data sheet	
	Manufacturer/ Supplier:	KEP Elektronikai Alkatrészgyártó Kft. Address: 8700 Marcali, 55 Kossuth Lajos Street Tel.: +36-82/502-100 Fax: Email: vtep@vtep.videoton.hu	
	Distributor:	KEP Elektronikai Alkatrészgyártó Kft.	
		Tel.: +36-82/502-100 Fax: Email: vtep@vtep.videoton.hu	
	Importer/ Distributor	Metabowerke GmbH Address: 72622 Nürtingen, Metabo-Allee 1	
		Tel.: +49 (0) 7022 - 72 3230 Fax: Email: anwendungsberatung@metabo.de	
	Responsible for the Data Sheet:	Safety Metabowerke GmbH +49 (0) 7022 - 72 3230	
1. 4. E	mergency telephone EGÉSZSÉGÜGYI T(1096 Budapest, Nag	number DXIKOLÓGIAI TÁJÉKOZTATÓ SZOLGÁLAT (ETTSZ) Iyvárad tér 2. (24 b. for emergency: only)	
	101.00-00-20-11-33		
SEC	CTION 2: HAZAF	RDS IDENTIFICATION	
2.1.	Classification of the	e substance or mixture	
	Classification acco	rding to 1272/2008/EC	
	This / these product for dangerous substa Materials and Mixtur	(s) comply with REACH Article 3 (3). The article does not apply to mandatory la ances. The product is a CLP Regulation (Classification, Labeling and Packaging es) does not constitute a substance that is hazardous to health or the environme	peling requirements Declaration of ent.
2.2.	- Label elements		
	Label elements acc	cording to 1272/2008/EC directive	
	Identity of all substant the mixture that cont to the classification of mixture:	nces in - ribute of the	
	Hazard Statements Not assigned	(H- phrases)	
	Precautionary State	ements (P- phrases)	
	Supplemental haza	rd infomation	
2.3.	Other hazards		
HB20	18/00026 🕢 HUN	GÁRIA VESZÉLYESÁRU MÉRNÖKI IRODA KFT. E-mail: hvesz@hvesz.hu F	AX: (36 1) 284-1263

	KEP Elektron	kai Alkatrészgyártó Kft. 7400 Kaposvár, Izzó	utca 3. Tel.: +36-82/502-10	0 Fax: +36-82/502-190	
Date Date of	2018.05.17.			Site: 2/10 Version nb: 1	
evision	The litium cell/batte used as recommen electrolyte containe only in case of mec punctured, incinera operation temperat The full text of H ph	ry covered in this Data Sheet is hermetica ded by the manufacturer. Under a normal d in a cell/battery are non-reactive provide hanical, electrical or thermal abuse. Warni ted, crushed, immersed in water, forced di ure range of the cell or battery. Risk of fire rases see Section 16 point.	Ily sealed in a stainless s condition of use, the elec d the battery integrity is r ing: the cells/batteries sho scharge, or exposed to a or explosion may occur in	teel container and not hazardous trode materials and liquid naintained. Risk of exposure exis ould not be short circuit, recharge temperatures above the declare n the above condition of abuse.	
SEC	CTION 3: COM	POSITION/INFORMATION ON	INGREDIENTS		
5.1.	Substances The product is a mi	xture. not a substance.			
.2.	Mixtures	,			
Produc dentifi	et Designati ers	on and Classification of components		Amount	
You ca	an see full text of H s	entences at 16 point.) Chemical Name	CAS No.	*Mass range in cell (g/g %)	
Electro Electro Electro	iyte lyte salt lyte solvent	Lithium hexafluorophosphate Includes one or more of the following:	21324-40-3	5-20 0.05-5	
-100110	, to contain	Ethelyne Carbonate Ethyl methyl Carbonate Diethyl Carbonate Fluoroethylene	96-49-1 623-53-0 616-38-6 114435-02-8	5-20	
PVDF Coppe	r	Carbonate Polyvinylidenfluoride Cu	24937-79-9 7440-50-8	<1 3-15	
Alumin Cathod Anode	ium le Nickel	Al Lithium nickel cobalt aluminium oxide Graphite	7429-90-5 177997-13-6 7782-42-5 Various	2-10 20-50 10-30 Balance	
Ind ine Becaus During	ert components se of the cell structur charge process a lit	e the dangerous ingredients will not be ava nium graphite intercalation phase is formed	ailable if used properly. d.		
Descrip Lithium Name / LiHD 4	otion I lon Rechargable Ba / Type .0 Ah Battery pack	attery: Number of cells Efficiency [5 72	Wh]		
SE(CTION 4: FIRS	T AID MEASURES			
l.1.1.	Inhaling Expose the person	to fresh air and use artificial respiration if r	needed. Seek medical att	ention if necessary.	
.1.2.	Eyes Rinse eyes with ple	nty of water for 15 minutes (remove contac	ct lenses if possible). See	ek immediate medical attention.	
.1.3.	 .3. Skin Remove contaminated clothes and rinse skin with plenty of water or take a shower for 15 min. Seek medical attention if necessary. 				
11	 Swallowed Rinse mouth with water first and then drink plenty of water. DO NOT induce vomiting. Seek immediate medical attention. Most important symptoms and effects, both acute and delayed 				

KEP	Elektronik	ai Alkatrészgyártó Kft. 7400 Kaposvár, Izzó utca 3. Tel.: +36-82/502-100 Fax: +36-82/5	02-190
Date 2018 Date of revision:	3.05.17.		Site: 3/10 Version nb: 1
4.3. Indication In case of to clear ou	of any im battery ru t any corr	mediate medical attention and special treatment needed pture, major leakage or explosion, follow the instructions described above. Provid osive fumes, gases or the pungent odor. Seek immediate medical attention.	de good ventilation
SECTION 5:	FIREFI	GHTING MEASURES	
Fire class accordi	na to the	National Fire Protection Code (54 / 2014, (XII, 5) BM)	
Non-flam	imable cl	ass	
5.1. Extinguish CO2 exting contain or s the batterie	l ing medi uishers or separate li s contain	a r copious quantities of water or water-based foam can be used to cool down burn ithium batteries, as long as the extent of the fire has not progressed to the point t is exposed.	ing materials that hat the lithium meta
5.1.1. Unsuitable No informa	e extingui tion availa	shing materials able.	
5.2. Special haz If possible, I but internal and may eli	zards aris remove ce organic m	sing from the substance or mixture ell(s) from fire fighting area. If heated above 125°C, cell(s) can explode/vent. Cell naterial will burn if the cell is incinerated. Batteries emit toxic hydrogen fluoride fu amounts of molten metal. Damaged batteries may self-ignite	is not flammable mes when burning,
5.3. Advice for Respiratory clothing to	firefighte protectio prevent bo	ers n: In all fire situations, wear self-contained breathing apparatus. Skin protection: ody contact with electrolyte solution. Eye protection: Safety glasses are recomme	Wear protective ended.
SECTION 6:	ACCID	ENTAL RELEASE MEASURES	
6.1. Personal p Under a no In the even	recaution rmal cond t of batter	ns, protective equipment and emergency procedures lition of use, a battery is hermetically sealed and not hazardous. y rapture and leakage: ventilate the contaminated area.	
6.2. Environme Keep spill/v according t	ental prec vaste awa ot he loca	autions by from water, rain, snow or moisture. Placed them in approved containers and di I, state or federal regulations.	spose them
6.3. Methods a Cover the s	nd mater pills or lea	ial for containment and cleaning up akage with sodium carbonate (Na2CO3) or 1:1 mixture of soda ash and slaked li	me.
6.4. Reference See Section Section 13	to other s n 7 for info for dispos	sections ormation on safe handling. See Section 8 for information on personal protective e sal information.	equipment. See
SECTION 7:	HANDL	ING AND STORAGE	
7.1. Precautior	is for safe	e handling	
7.1.1. Technical Avoid any c Protect fror	precautio contact wit n heat, sh	ons th the contents in case of rupture, leakage or explosion. ort circuit of terminals, which may induce dangerous elevated temperatures.	
7.1.2. Safe handl Do not shor Do not crus Advice on p	ting guida rt circuit, c h, pierce, protection	ance disassemble, open, alter or directly solder to. incinerate or expose to water. against fire and explosion: Keep away from open flames, hot surfaces and source	es of ignition.
7.2. Conditions 7.2.1. Technical	s for safe measures	storage, including any incompatibilities s/storage conditions	
HB2018/00026		GÁRIA VESZÉLYESÁRU MÉRNÖKI IRODA KFT. E-mail: hvesz@hvesz.hu FA	X: (36 1) 284-1263

-	KEP Elektronik	ai Alkatrészgyártó Kft. 740	0 Kaposvár, Izzó utca 3. To	el.: +36-82/502-100 Fax: +3	6-82/502-190
Date Date of revision:	2018.05.17.				Site: 4/10 Version nb: 1
 	Recommended store electrical equipment, life and degrade perc	e temperature 20 °C. Stor nor expose to direct sun dormance. Do not store b	e in a dry and ventilated a light for a long period. Ele patteries in high humidity o	area. Do not place the ba evated temperatures can environment for a long pe	attery near heating or result in shortened batteriod.
7.2.2. I	Incompatible produ Do not store togethe Keep the water away	i cts r with oxidizing and acidio /. ctrical conductive materia	c materials.		
7.2.3.	Packaging material	S s			
7.3.	Specific end use(s) Section 1.2. Partially	mentioned partial use, n	o other special use.		
SEC	TION 8: EXPOS	SURE CONTROLS	/ PERSONAL PRO	DTECTION	
3.1. Lir Co	Control parameters mit values of Joint De omponent name:	ecree 25/2000 ACGIH TL	V: AK value (mg/m3) -	CK value (mg/m3)	MK value (mg/m3)
Othe	r				
.2.	Exposure controls	not required when using	these products in pormal	use scenarios Ventilatio	n is required if there is
 	leakage from the cell Other Protective Equ	l or battery. ipment: Have a safety sh	nower or eye wash station	readily available.	
l	Practice and maintai	n good housekeeping. Sure controls: Avoid relea	se to the environment.	onng lood, dhink of lobad	co near the product.
ا ا 3.2.1. م	Practice and maintai Environmental expos Appropriate engine	n good housekeeping. sure controls: Avoid relea ering controls	se to the environment.	oring lood, drink or lobac	co near the product.
B.2.1.	Programe measures: I Practice and maintai Environmental expos Appropriate engine Individual protectio	n good housekeeping. sure controls: Avoid relea ering controls n measures, such as p	e in work areas. Avoid sid se to the environment. ersonal protective equip	oment	co near the product.
B.2.1. B.2.2. I B.2.2. a)	Pygiene measures: I Practice and maintai Environmental expos Appropriate engine Individual protectio Eye/face protecti	on not eat, drink of smok n good housekeeping. sure controls: Avoid relea ering controls on measures, such as po on	e in work areas. Avoid sid se to the environment. ersonal protective equip	oment	co near the product.
B.2.1. A B.2.2. I 3.2.2. a)	Pygiene measures: I Practice and maintai Environmental expose Appropriate engine Individual protectio Eye/face protectio In case of leakage Use Safety goggle	or not eat, drink of smok n good housekeeping. sure controls: Avoid relea ering controls on measures, such as p on e or exposure of internal es, or a face shield with f	e in work areas. Avoid sid se to the environment. ersonal protective equip components/materials: ull face protection.	oment	co near the product.
B.2.1. A B.2.2. a) B.2.2. a) Good B.2.2. b)	Arygiene Measures: I Practice and maintai Environmental expose Appropriate engine Individual protectio Eye/face protectio In case of leakage Use Safety goggle Skin protection In case of leakage	on not eat, drink of smok n good housekeeping. sure controls: Avoid relea ering controls on measures, such as p on e or exposure of internal es, or a face shield with f	e in work areas. Avoid sid se to the environment. ersonal protective equip components/materials: ull face protection.	oment	co near the product.
8.2.1. , B.2.2. a) B.2.2. a) B.2.2. a) B.2.2. b) B.2.2. b)	Arygiene Measures: I Practice and maintai Environmental expose Appropriate engine Individual protection Eye/face protection In case of leakage Use Safety goggle Skin protection In case of leakage Wear long sleeve ii. Hand protection In case of leakage Use Nitrile or PVC	a good housekeeping. sure controls: Avoid relea ering controls on measures, such as pro- tion e or exposure of internal e or exposure of internal d clothing to avoid skin c e or exposure of internal c gloves at least 15 mil th	e in work areas. Avoid sid se to the environment. ersonal protective equip components/materials: ull face protection. components/materials: ontact if handling. components/materials: ick.	oment	co near the product.
3.2.1. , 3.2.2. a) 3.2.2. a) () 3.2.2. a) () 3.2.2. a) () 3.2.2. b) () () 3.2.2. b) () () () () () () () () () () () () ()	Appropriate engine Environmental expose Appropriate engine Individual protectio Eye/face protectio In case of leakage Use Safety goggle Skin protection In case of leakage Wear long sleeve ii. Hand protection In case of leakage Use Nitrile or PVC Respiratory prote During routine op vapors are general	Do not eat, drink of smok n good housekeeping. sure controls: Avoid relea ering controls on measures, such as pro- ion e or exposure of internal d clothing to avoid skin c e or exposure of internal d clothing to avoid skin c e or exposure of internal d clothing to avoid skin c e or exposure of internal d clothing to avoid skin c e or exposure of internal d clothing to avoid skin c e or exposure of internal d clothing to avoid skin c e or exposure of internal d clothing to avoid skin c e or exposure of internal d clothing to avoid skin c e or exposure of internal d clothing to avoid skin c e or exposure of internal d clothing to avoid skin c e or exposure of internal d clothing to avoid skin c e or exposure of internal d clothing to avoid skin c	e in work areas. Avoid sid se to the environment. ersonal protective equip components/materials: ull face protection. components/materials: ontact if handling. components/materials: ick. t required. However, if de ce inorganic vapor and ga	oment aling with an electrolyte as/acid/particulate respira	leakage and irritating ator is required.
 8.2.1. (1) 8.2.2. (2) 8.2.2. (3) 8.2.2. (4) 8.2.2. (5) 8.2.2. (5) 8.2.2. (6) 8.2.2. (7) 8.2.2.2. (7) 8.2.2	Appropriate engine Environmental expose Appropriate engine Individual protectio Eye/face protectio In case of leakage Use Safety goggle Skin protection In case of leakage Wear long sleeve i. Hand protection In case of leakage Use Nitrile or PVC Respiratory prote During routine op vapors are genera Thermal hazard Not applicable.	Do not eat, drink of smok n good housekeeping. sure controls: Avoid relea ering controls on measures, such as p fon e or exposure of internal d clothing to avoid skin c e or exposure of internal d clothing to avoid skin c e or exposure of internal gloves at least 15 mil th ection eration, a respirator is no ated, an approved half fa	e in work areas. Avoid sid se to the environment. ersonal protective equip components/materials: ull face protection. components/materials: ontact if handling. components/materials: ick. t required. However, if de ce inorganic vapor and ga	oment aling with an electrolyte as/acid/particulate respira	leakage and irritating
 3.2.1. , 3.2.2. a) 3.2.2. b) 3.2.2. b) 3.2.2. c) 3.2.2. c) 3.2.2. d) 3.2.3. 	Appropriate engine Individual protectio Eye/face protectio Eye/face protectio In case of leakage Use Safety goggle Skin protection In case of leakage Wear long sleeve i. Hand protection In case of leakage Use Nitrile or PVC Respiratory prote During routine op vapors are genera Thermal hazard Not applicable. Environmental ex See sections 6, 7,	a good housekeeping. sure controls: Avoid relea ering controls on measures, such as pro- ion e or exposure of internal d clothing to avoid skin c e or exposure of internal d clothing to avoid skin c e or exposure of internal gloves at least 15 mil th ection eration, a respirator is no ated, an approved half far xposure control , 12, 13.	e in work areas. Avoid sid se to the environment. ersonal protective equip components/materials: ull face protection. components/materials: ontact if handling. components/materials: ick. t required. However, if de ce inorganic vapor and ga	aling with an electrolyte as/acid/particulate respira	leakage and irritating ator is required.
3.2.1. (3.2.2. a) () 3.2.2. b) 3.2.2. b) 3.2.2. c) () 3.2.2. c) () 3.2.2. d) 3.2.3.	Appropriate engine Individual protectio Environmental expose Appropriate engine Individual protectio Eye/face protecti In case of leakage Use Safety goggle Skin protection In case of leakage Wear long sleeve i. Hand protection In case of leakage Use Nitrile or PVC Respiratory prote During routine op vapors are genera Thermal hazard Not applicable. Environmental ex See sections 6, 7,	a good housekeeping. sure controls: Avoid relea ering controls on measures, such as pro- ion e or exposure of internal d clothing to avoid skin c e or exposure of internal d clothing to avoid skin c e or exposure of internal gloves at least 15 mil th ection eration, a respirator is no ated, an approved half far xposure control , 12, 13.	e in work areas. Avoid sid se to the environment. ersonal protective equip components/materials: ull face protection. components/materials: ontact if handling. components/materials: ick. t required. However, if de ce inorganic vapor and ga	aling with an electrolyte ss/acid/particulate respira	leakage and irritating ator is required.

	KEP Elektronikai Alkatrészgyártó Kft. 7400 Kaposvár, Izzó utca 3. Tel.: +36-82/502-100 Fax: +36-82/502-190					
Date Date of revision	2018.05.17.		Site: 5/10 Version nb: 1			
SEC	TION 9: PHYSICAL AND C	HEMICAL PROPERTIES				
9.1.	Information on basic physical and	chemical properties				
9.1. aj	Consistence:	Not available				
	Colour:	Various				
91 h)	Odour	Pungent odor if leaking				
9.1. c)	Odour Threshold	None established.				
9.1. d)	pH-value	Not available.				
9.1. e)	Melting point/freezing point	Not available.				
9.1. f)	Initial boiling point and boiling ran	ge Not available.				
9.1. g)	Flash-point:	Not available.				
9.1. h)	Evaporation rate	Not available.				
9.1. i)	Flammability (solid, gas)	Not flammable.				
9.1. j)	Upper/lower Flammability or explo	sive limits				
	- lower:	Not available.				
	- upper:	Not available.				
9.1. k)	Vapour Pressure (20°C):	Not available.				
9.1. l)	Vapour Density:	Not available.				
9.1. m)	Relative density	NOL AVAIIADIE.				
9.1.11)	Water:	Incolubio				
	- Other solvents:	Not available				
9.1 0)	- Other solvents.	Not available.				
9.1.0)	(n-octanol/water):	Not available.				
9.1. p)	Auto-ignition temperature	Not available.				
9.1. q)	Decomposition Temperature:	Not available.				
9.1. r)	Viscosity:	Not applicable to batteries. Not known for the free electrolyte.				
9.1. s)	Explosive properties	Not available.				
9.1. t)	Oxidising properties	Not available.				
9.2.	Other Informations					
	Specific gravity (water=1), (20°C): Other items:	Not available.				
SEC	TION 10: STABILITY AND I	REACTIVITY				
L]			
10.1.	Reactivity					
	Regarding its reaction, the product is	not hazardous.				
10.2.	Chemical stability					
	The batteries are stable under norma	l operation and storage conditions.				
10.3.	Possibility of hazardous reactions					
	The section of the second state states along the					

There is no hazardous reaction during the prescribed application. Hazardous polymerization: will not occur.

10.4. Conditions to avoid

Short-circuiting, recharge, over-discharge, heating over the declared operation temperature range of the product. Keep away from open flames, hot surfaces and sources of ignition. Do not puncture, crush or incinerate.

10.5. Incompatible materials

Water, strong, acid or alkalis solutions, oxidizing agents.

10.6. Hazardous decomposition products

In case of open cells, there is the possibility of hydrofluoric acid and carbon monoxide release. No decomposition if stored and applied as directed.

HUNGÁRIA VESZÉLYESÁRU MÉRNÖKI IRODA KFT. E-mail: hvesz@hvesz.hu FAX: (36 1) 284-1263

KEP Elektronikai Alkatrészgyártó Kft. 7400 Kaposvár, Izzó utca 3. Tel.: +36-82/502-100 Fax: +36-82/502-190	
--	--

Date Date of revision: 2018.05.17.

SECTION 11: TOXICOLOGICAL INFORMATION

Actual material

Samsung INR21700-40T; Lithium Ion Rechargable Battery Product numbers: 321001000, 321001190

11.1. Information on toxicological effects

11.1.a. Acute toxicity

Inhalation

Inhalation of vapors from a leaking cell or battery is expected to cause severe irritation of the mouth and upper respiratory tract with a burning sensation, pain, burns and inflammation in the nose and throat; there may also be coughing or difficulty breathing.

According to reports in animals

Oral

The electrolyte contained within the cell or battery is a corrosive liquid. Ingestion of this electrolyte would be harmful. Swallowing may result in nausea, vomiting, diarrhea, abdominal pain and chemical burns to the gastrointestinal tract. During normal usage ingestion should not be a means of exposure. According to reports in animals

Dermal

The electrolyte contained within the cell or battery is a corrosive liquid and it is expected that it would cause skin burns or severe irritation to the skin if not washed off immediately. Correct handling procedures should minimize the risk of skin irritation. People with pre-existing skin conditions, such as dermatitis, should take extreme care so as not to exacerbate the condition.

According to reports in animals

11.1.b. Skin corrosion/ Skin irritation

The electrolyte contained within the cell or battery is classified as a corrosive liquid and is expected to exhibit Dermal Corrosivity/Irritation.

11.1.c. Serious eye damage/ Eye irritation

The electrolyte contained within the cell or battery is classified as a corrosive liquid and is expected to exhibit serious Damage/Corrosivity.

11.1.d. Respiratory or skin sensitisation

The electrolyte contained within the cell or battery is not expected to be a skin sensitizer according to OECD test 406, based on the available data and the known hazards of the components. The electrolyte contained within the battery is not expected to be a respiratory tract sensitizer, based on the available data and the known hazards of the components.

11.1.e. Germ cell mutagenicity

The electrolyte contained within the cell or battery is not expected to be mutagenic according to test such as OECD tests 471, 475, 476, 478 and 479, based on the available data and the known hazards of the components.

11.1.f. Carcinogenicity

The electrolyte contained within the cell or battery is a corrosive liquid. Ingestion of this electrolyte would be harmful. Swallowing may result in nausea, vomiting, diarrhea, abdominal pain and chemical burns to the gastrointestinal tract. During normal usage ingestion should not be a means of exposure.

11.1.g. Reproductive toxicity

The electrolyte contained within the cell or battery is not expected to be a reproductive hazard according to test such as OECD tests 414 and 421, based on the available data and the known hazards of the components.

11.1.h. Specific target organ toxicity - single

The electrolyte contained within the cell or battery is corrosive and is expect to cause respiratory irritation by inhalation. Inhalation of vapors may lead to severe irritation of the mouth and upper respiratory tract with a burning sensation, pain, burns and inflammation in the nose and throat; there may also be coughing or difficulty breathing.

11.1.i. Specific target organ toxicity - repeated exposure

The cells or batteries are not expected to cause organ damage from prolonged or repeated exposure according to tests such as OECD tests 410 and 412, based on the available data and the known hazards of the components.

11.1.j. Aspiration hazard

The cells or batteries are not classified as an aspiration hazard, based on the available data and the known hazards of the components. However, due to the corrosive nature of the product if swallowed, do NOT induce vomiting. If vomiting has occurred after ingestion the person should be observed to ensure that aspiration into the lungs has not occurred and assessed for chemical burns to the gastrointestinal and respiratory tracts.

Date Date of	2018.05.17.		Site: 7/10 Version nb: 1			
1.2.	Delaved and immed	iate effects as well as chronic effects from short and long	g-term exposure			
	Not available.					
1.3.	Other informations					
	The hazardous comp the electrode materia seals remain intact. or is mechanically, e comes into contact w	onents of the cell or battery are contained within a sealed uni Is and liquid electrolyte are non-reactive provided that the cel The potential for exposure should not exist unless the battery ectrically or physically abused/damaged. The following toxico ith the electrolyte.	it. Under recommended use condition II or battery integrity remains and the leaks, is exposed to high temperature blogy data is in respect to if a person			
SEC	TION 12: ECOL	OGICAL INFORMATION				
Actual	material					
	Samsung INR21700 Product numbers: 32	40T; Lithium Ion Rechargable Battery 1001000_321001190				
2.1.	Toxicitv					
2.1.1.	Water toxicity					
	The cell/battery does	not present environmental hazard when being properly used	l or disposed.			
	The cell/battery does The internal compon systems.	not contain mercury, cadmium, or lead. ents can harm marine environments. Avoid any release to wa	aterways, groundwater, or waste			
12.1.2.	Terrestrial toxicity The cell/battery does	not present environmental hazard when being properly used	l or disposed.			
2.1.3.	Behaviour in waste	water treatment plants				
	The cell/battery does	not present environmental hazard when being properly used	l or disposed.			
2.2.	Persistence and de	Jradability				
2.2.1.	General					
	The cell/battery does	not present environmental nazard when being properly used	l or disposed.			
2.2.2.	In water The cell/battery does	not present environmental hazard when being properly used	l or disposed.			
2.2.3.	The cell/battery does	not present environmental hazard when being properly used nts	l or disposed.			
2.2	The cell/battery does	not present environmental hazard when being properly used	l or disposed.			
24	The cell/battery does	not present environmental hazard when being properly used	l or disposed.			
	The cell/batterv does	not present environmental hazard when being properly used	l or disposed.			
2.5.	Results of PBT and	vPvB assessment	•			
	PBT and vPvB ingre	lients are not present.				
2.6.	Other adverse effect	ts				
	The cell/battery does	not present environmental hazard when being properly used	l or disposed.			
SEC	TION 13: DISPO	SAL CONSIDERATIONS				
3.1	Waste treatment m	athods				
	Waste disposal mus	be in accordance with the applicable regulations and laws.				
3.2.	Package disposal					
	Disposal of the Lithiu Local requirements of Incineration should r gas and fume treatm	m batteries should be performed by permitted, professional fi f hazardous waste treatment and hazardous waste transporta ever be performed by battery users, but by trained profession ent.	irms knowledgeable in Federal, State ation. nal in authorized facilities with proper			
• •	Recycling of battery	snould be done in authorized facilities.				
~ ^	Wasto identification	codes				

		299ario nti. 7400 naposvar, izzo utca 3. 1el.: +36-82/502-100 Fax: +	o-δ∠/ວυ∠-190
Date Date of revision	2018.05.17. ::		Site: 8/10 Version nb: 1
	Packing: 20 01 33* batteries a	nd accumulators included in 16 06 01, 16 06 02 or 16 06 03 and	unsorted batteries and
	Residue: 20 01 33* batteries a accumulators containing these	batteries nd accumulators included in 16 06 01, 16 06 02 or 16 06 03 and batteries	l unsorted batteries and
SEC	TION 14: TRANSPOR		
14.1.	UN number	3480	
ADR/A	DN/RID		
14.2.	Proper shipping name:	LITHIUM ION BATTERIES	
14.3.	Transport hazard class(es):	9	
	l abels [.]	l ithium battery mark	
	Classification code	M4	
14.4.	Packing group:	-	
	Hazard identification number:	90	
14.5.	Environmental hazards:	NO (F)	
IMDG		(-)	
14,2	Proper shipping name:	LITHIUM ION BATTERIES	
14.3.	Transport hazard class(es)	9	
-			
111	Labels Packing group:	Lithium battery mark	
17.7.	EmS:	F-A. S-I	
	Marine pollutant:	NO	
ΙΑΤΑ			
14.2.	Proper shipping name:	LITHIUM ION BATTERIES	
14.3.	Transport hazard class(es):	9	
	Labels	Lithium battery mark [Section II]; 9A + Lithium battery mark [S	ection IB]
14.4.	Packing group:	-	
	PAX:	Forbidden	
	CAO:	965	
	UN number:	3480	
14.6.	Special precautions for user		
447	Trepopert in bulk seconding	to Among II of MARROL 72/70 and the IRC Code	
14.7.	Not applicable.	to Annex II of MARPOL 73/78 and the IBC Code	
SEC	TION 15: REGULATO	RY INFORMATION	
15.1.	Safety, health and environme	ental regulations/legislation specific for the substance or m	ixture
	There is no limit according to A	nnex XVII of REACH. Does not contain substances in the REA	CH candidate list.
15.2.	Chemical Safety	as not been performed	
15 3	Chemical safety assessment h	as not been performed.	
	(219/2011. (X.20.) Korm.rend	elet szerint)	
	It is not covered by SEVESO.	·	
15.4.	Storage category		
	13 stowage class: Not combus	tible solid substances	
HB20	18/00026 (🥢) HUNGÁRIA VE	SZELYESARU MERNOKI IRODA KFT. E-mail: hvesz@hvesz	.hu FAX: (36 1) 284-12

	2018.05.17.		Site:	9/10
Date of			Version nb [.]	1
revision	1:		V CI CI CI CI I I I I	•
15.5.	.5. WGK - German Water hazard classes			
15.6.	Other relevant natio	onal regulations		
	Regulation (EC) No Registration, Evaluat Agency, amending D (EC) No 1488/94 as 93/105/EC and 2000	1907/2006 of the European Parliament and of the Council of 18 December 200 tion, Authorisation and Restriction of Chemicals (REACH), establishing a Europ Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and C well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC /21/EC	6 concerning t bean Chemica ommission Re , 93/67/EEC,	the ls egulatio
	Commission Regulat Parliament and of the Regulations Regulat classification, labellir 1999/45/EC, and am 2000 XXV, Jaw Chen	tion (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of e Council on the Registration, Evaluation, Authorisation and Restriction of Cher ion (EC) No 1272/2008 of the European Parliament and of the Council of 16 De ing and packaging of substances and mixtures, amending and repealing Directive ending Regulation (EC) No 1907/2006	of the Europea micals (REACI ecember 2008 ves 67/548/EE	n H) on C and
	Decree No. 44/2000 hazardous substance 25/2000. (IX. 30.) Jo	(XII. 27.) of the Minister of Health on the detailed rules of certain procedures a es and hazardous products, as amended by Decree No. int Decree of the Minister of Health, Ministry of Social and Family Affairs chemi	nd activities re cal safety of	lated t
	54/2014. (XII. 5) Min 1993. XCIII. law occu regulations in a unifo	ister of Interior on the National Fire Protection Regulations upational protection Act on Occupational Health and Safety at Work Decree 5/1 orm structure	993. (XII.26.)	MüM
	Waste: 2012 CLXXX related to hazardous	V. Law on waste; 225/2015. (VIII.7.) Government Decree on detailed rules for waste.	certain activitie	es
	Decree 72/2013 (VII) packaging waste ma	I.27.) Of the Ministry of Agriculture on the Waste List; 442/2012. (XII.29.) On pa nagement activities.	ckaging waste	e and
	Road transport Class Dangerous Goods 6 Regulation (X 17): 1	s: 2015 LXXXIX. Law and the European Agreement concerning the Internationa 1/2013 "A" on certain issues and Annex "B" and the promulgation of the domes 78/2017 (VII 5) government decree:	al Carriage of stic application	. NFM
	Rail transport: 2015 Convention (COTIF) domestic application Inland transport: the	LXXXIII. International Railway Act, the appendix, the Protocol dated 3 June 199 , adopted in Vilnius Annex C promulgation and application of certain aspects of of the promulgation of 62/2013. NFM Regulation (X.17.); 179/2017. (VII.5.) go 2015 LXXXIV. Done at Geneva Act, 2000, the day of May 26, Dangerous Good t concerning the International Inland Waterway (ADN) promulgation of the Rule	99 amending T the domestic vernment decr ds annexed to	ransp and th ee; the
	application; 177/201	7. (VII.5.) government decree;	es and domest	lic
SEC	application; 177/201	7. (VII.5.) government decree;	es and domes	
SEC	The review affected	R INFORMATION	es and domest	
SEC 16.1.a.	TION 16: OTHE	R INFORMATION	es and domest	
SEC 16.1.a. 16.1.b.	TION 16: OTHE	T. (VII.5.) government decree;	es and domes	
SEC 16.1.a. 16.1.b.	European Agreemen application; 177/201 CTION 16: OTHE The review affected The abbreviation an REACH Registration CSR Chemical Safet	Concerning the international mand waterway (ADN) promugation of the Ruk C. (VII.5.) government decree; ER INFORMATION I this chapters: nd acronyms used in Safety data sheet , Evaluation, Authorisation and restriction of Chemicals v Report	es and domes	
SEC 16.1.a. 16.1.b.	European Agreemen application; 177/201 CTION 16: OTHE The review affected The abbreviation and REACH Registration CSR Chemical Safet ÁK value (permissible does not normally had CK value (permissible)	 a this chapters: b this chapters: c Evaluation, Authorisation and restriction of Chemicals c y Report e average concentration): the average concentration of air pollutant ina workplate c average effect on the worker's health, e peak concentration) (shortest allowable maximum air contamination): 	es and domest	hift whi
SEC 16.1.a. 16.1.b.	European Agreemen application; 177/201 CTION 16: OTHE The review affected The abbreviation an REACH Registration CSR Chemical Safet ÁK value (permissibl does not normally ha CK value (permissibl MK value (maximum OEL Occupational E DNEL Derived No Ef	7. (VII.5.) government decree; ER INFORMATION I this chapters: Ind acronyms used in Safety data sheet , Evaluation, Authorisation and restriction of Chemicals y Report e average concentration): the average concentration of air pollutant ina workpla we an adverse effect on the worker's health, e peak concentration) (shortest allowable maximum air contamination): concentration): highest concentration tolerated during shift xposure Limit fect L evel	es and domest	hift whi
SEC 16.1.a. 16.1.b.	European Agreemen application; 177/201 CTION 16: OTHE The review affected The abbreviation and REACH Registration CSR Chemical Safet ÁK value (permissible does not normally had CK value (permissible MK value (maximum OEL Occupational E DNEL Derived No Eff PNEC Predicted No LD50 Lethal Dose 50	ER INFORMATION It this chapters: It acronyms used in Safety data sheet , Evaluation, Authorisation and restriction of Chemicals y Report e average concentration): the average concentration of air pollutant ina workplate ive an adverse effect on the worker's health, e peak concentration) (shortest allowable maximum air contamination): concentration): highest concentration tolerated during shift xposure Limit fect Level Effect Concentration 0%	es and domest	hift whi
SEC 16.1.a. 16.1.b.	European Agreemen application; 177/201 CTION 16: OTHE The review affected The abbreviation and REACH Registration CSR Chemical Safet ÁK value (permissible does not normally has CK value (permissible MK value (maximum OEL Occupational E DNEL Derived No Eff PNEC Predicted No LD50 Lethal Dose 50 LC50 Lethal Concen EC50 Effective Conc	7. (VII.5.) government decree; ER INFORMATION I this chapters: Ind acronyms used in Safety data sheet , Evaluation, Authorisation and restriction of Chemicals y Report e average concentration): the average concentration of air pollutant ina workpla ive an adverse effect on the worker's health, le peak concentration) (shortest allowable maximum air contamination): concentration): highest concentration tolerated during shift xposure Limit fect Level Effect Concentration 0% tration 50% centration 50%	es and domest	hift whi
SEC 16.1.a. 16.1.b.	European Agreemen application; 177/201 TION 16: OTHE The review affected The abbreviation an REACH Registration CSR Chemical Safet ÁK value (permissibl does not normally ha CK value (permissibl MK value (maximum OEL Occupational E DNEL Derived No Eff PNEC Predicted No LD50 Lethal Dose 50 LC50 Lethal Concen EC50 Effective Cond NOEL No Observabl	EXAMPLE 1 EXAMPLE 1 EXAM	es and domest	hift whi
SEC 16.1.a. 16.1.b.	European Agreemen application; 177/201 CTION 16: OTHE The review affected The abbreviation an REACH Registration CSR Chemical Safet ÁK value (permissibl does not normally ha CK value (permissibl MK value (maximum OEL Occupational E DNEL Derived No Ef PNEC Predicted No LD50 Lethal Dose 50 LC50 Lethal Concen EC50 Effective Conc NOEL No Observabl NOAEC No Observabl	EXAMPLE 1 EXAMPLE 1 EXAM	es and domest	hift whi
SEC 16.1.a. 16.1.b.	European Agreemen application; 177/201 CTION 16: OTHE The review affected The abbreviation and REACH Registration CSR Chemical Safet ÁK value (permissible does not normally has CK value (permissible MK value (permissible NK value (permissible MK value (permissible NK value (permissible	EXAMPLE 1 EXAMPLE 1 EXAM	es and domest	nift whi
SEC 16.1.a. 16.1.b.	European Agreemen application; 177/201 TION 16: OTHE The review affected The abbreviation an REACH Registration CSR Chemical Safet ÁK value (permissibl does not normally ha CK value (permissibl MK value (permissibl MK value (maximum OEL Occupational E DNEL Derived No Ef PNEC Predicted No LD50 Lethal Dose 50 LC50 Lethal Concen EC50 Effective Cond NOEL No Observabl NOEC No Observabl NOAEC No Observat STP Sewage Treatm	EXAMPLE 1 Concentration and a water way (ADN) promulgation of the Rule 7. (VII.5.) government decree; ER INFORMATION It this chapters: Ind acronyms used in Safety data sheet , Evaluation, Authorisation and restriction of Chemicals y Report e average concentration): the average concentration of air pollutant ina workplative an adverse effect on the worker's health, e peak concentration) (shortest allowable maximum air contamination): concentration): highest concentration tolerated during shift xposure Limit fect Level Effect Concentration 30% rentration 50% e Effect Level le Effect Concentration ble Adverse Effect Concentration ble Adverse Effect Level entration plant	es and domest	hift whi
SEC 16.1.a. 16.1.b.	European Agreemen application; 177/201 TION 16: OTHE The review affected The abbreviation an REACH Registration CSR Chemical Safet ÁK value (permissibl does not normally ha CK value (permissibl MK value (maximum OEL Occupational E DNEL Derived No Ef PNEC Predicted No LD50 Lethal Dose 50 LC50 Lethal Concen EC50 Effective Conc NOEL No Observab NOAEC No Observab NOAEC No Observat STP Sewage Treatm PBT Persistent, Bioa vPvB Very persistent	T. (VII.5.) government decree; T. (VII.5.) government decree; This chapters: Ind acronyms used in Safety data sheet , Evaluation, Authorisation and restriction of Chemicals y Report e average concentration): the average concentration of air pollutant ina workplay we an adverse effect on the worker's health, e peak concentration) (shortest allowable maximum air contamination): concentration): highest concentration tolerated during shift xposure Limit fect Level Effect Concentration 0% tration 50% e Effect Level le Effect Concentration ble Adverse Effect Concentration ble Adverse Effect Concentration ble Adverse Effect Level ent Plant iccumulative, and Toxic i and very bioaccumulative	ace air for a sh	hift whi
SEC 16.1.a. 16.1.b.	European Agreemen application; 177/201 TION 16: OTHE The review affected The abbreviation an REACH Registration CSR Chemical Safet ÁK value (permissibl does not normally ha CK value (permissibl MK value (permissibl NEL Derived No Ef PNEC Predicted No LD50 Lethal Dose 50 LC50 Lethal Concen EC50 Effective Cond NOEL No Observabl NOEC No Observabl NOAEL No Observabl NOAEL No Observat STP Sewage Treatm PBT Persistent, Bioa vPvB Very persistent	7. (VII.5.) government decree; ER INFORMATION I this chapters: Ind acronyms used in Safety data sheet , Evaluation, Authorisation and restriction of Chemicals y Report e average concentration): the average concentration of air pollutant ina workpla ive an adverse effect on the worker's health, le peak concentration) (shortest allowable maximum air contamination): concentration): highest concentration tolerated during shift xposure Limit fect Level Effect Concentration 0% tration 50% e effect Level le Effect Concentration ble Adverse Effect Concentration ble Adverse Effect Concentration ble Adverse Effect Level lent Plant lecumulative, and Toxic t and very bioaccumulative ences and sources for data	es and domest	nift whi
SEC 16.1.a. 16.1.b.	European Agreemen application; 177/201 CTION 16: OTHE The review affected The abbreviation and REACH Registration CSR Chemical Safet ÁK value (permissible does not normally had CK value (permissible MK value (permissible NOEL Occupational E DNEL Derived No Eff PNEC Predicted No LD50 Lethal Dose 50 LC50 Lethal Concen EC50 Effective Concen NOEL No Observable NOAEC No Observable NOAEL NO Observable N	R incontenting the international initiation waterway (ADN) prohibitigation of the Rule 7. (VII.5.) government decree; R INFORMATION It this chapters: Ind acronyms used in Safety data sheet , Evaluation, Authorisation and restriction of Chemicals y Report e average concentration): the average concentration of air pollutant ina workplative an adverse effect on the worker's health, e peak concentration) (shortest allowable maximum air contamination): concentration): highest concentration tolerated during shift xposure Limit fect Level Effect Concentration 0% tration 50% eentration 50% eentrat	ace air for a sh	hift whi
SEC 16.1.a. 16.1.b. 16.1.c. 16.1.d.	European Agreemen application; 177/201 CTION 16: OTHE The review affected The abbreviation an REACH Registration CSR Chemical Safet ÁK value (permissibl does not normally ha CK value (permissibl MK value (permissibl NEL Derived No Ef PNEC Predicted No LD50 Lethal Dose 50 LC50 Lethal Concen EC50 Effective Conc NOEL No Observabl NOEC No Observabl NOAEC No Observabl NOAEL NO Observabl NOBEL NO Observabl NOBE	Research and the international mained waterway (ADN) promulgation of the Kuter (VII.5.) government decree; ER INFORMATION This chapters: Ind acronyms used in Safety data sheet , Evaluation, Authorisation and restriction of Chemicals y Report e average concentration): the average concentration of air pollutant ina workplative an adverse effect on the worker's health, e peak concentration) (shortest allowable maximum air contamination): concentration) (shortest allowable maximum air contamination): concentration): highest concentration tolerated during shift xposure Limit fect Level Effect Concentration % tration 50% tentration 50% e Effect Level le Effect Concentration ble Adverse Effect Concentration ble Adverse Effect Concentration ble Adverse Effect Level tent Plant toccumulative, and Toxic t and very bioaccumulative ences and sources for data Safety Data Sheet - Lithium-ion battery INR21700-40T	ace air for a sh	nift whi
SEC 16.1.a. 16.1.b. 16.1.c. 16.1.d.	European Agreemen application; 177/201 CTION 16: OTHE The review affected The abbreviation and REACH Registration CSR Chemical Safet ÁK value (permissible does not normally had CK value (permissible does not normally had CK value (permissible MK value (maximum OEL Occupational E DNEL Derived No Eff PNEC Predicted No LD50 Lethal Dose 50 LC50 Lethal Concen EC50 Effective Concen EC50 Effective Concen NOEL No Observable NOAEL No Observable NOAEL No Observated NOAEL NO Observated NOAE	Reserve and very bioaccumulative Reserve and very bioaccumulative reserved to the reserve to the store of t	ace air for a sh	hift whi

	KEP Elektronikai Alkatrészgyártó Kft. 7400 Kaposvár, Izzó utca 3. Tel.: +36-82/502-100 Fax: +36-82/502-190				
Date Date of revision:	2018.05.17.		Site: 10/10 Version nb: 1		
16.2.	Technical advisory KEP Elektronikai Alk Address: 7400 Kapo Tel.: +36-82/502-100	services atrészgyártó Kft. svár, Izzó utca 3. Fax: +36-82/502-190			
16.3.	Further information The data for the haza This / these product for dangerous substa Materials and Mixture	rdous ingredients were taken respectively from the last version of the cont s) comply with REACH Article 3 (3). The article does not apply to mandato nces. The product is a CLP Regulation (Classification, Labeling and Packa s) does not constitute a substance that is hazardous to health or the envir	ractor's safety data shee ry labeling requirements aging Declaration of onment.		
16.4.	General information This information relation In case of products a The information on the provided in good faith Users should note the application. This data legislation, regulation It is the responsibility product. The responsibility of data sheet and necessimal may get in contact in	es TO THE PRODUCT AS SUCH and is in compliance with the specification and mixtures, it should be ensured that no new risks arise. his data sheet is based on our best knowledge at the time of printing the n. However, certain data are being reviewed. e potential for additional risks in case of using the product for purposes oth a sheet may be used and reproduced for prevention and safety purpose s and practical rules, and documents should not be considered complete. of the person receiving the product to consult all documents related to the parties handling the product also includes to pass on the whole of the infor ssary for work safety and for the protection of health and the environment any way with the product (use, storage, cleaning of containers, other operation)	ons of the enterprise. e safety data sheet and her than the recommende es only. The references he use and handling of the mation listed on the safe ht, to the next person whations).		