EDSYN GMBH EUROPA
Zentrum für Löt- und Entlötsysteme

EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

22.10.2026

Safety Data Sheet – according to the REACH Regulation (EC) No. 1007/2006 amended by Regulation (EU) 2020/878

Trade Name: FL 22 CL	**Flux Gel**	**F-SW 32 DIN EN 29454 / 1.1.3.**
1.) IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING		
1.1.) Product identifier		
Product form:	Mixture	
Trade name:	FL 22 CL CLEAR BGA AND SMD Gel Flux	
Product code:	FL22CL	
Type of product:	Mixture	
1.2.) Relevant identified uses of the substance or mixture and uses advised against		
1.2.1.) Relevant identified uses		
Main use category:	Industrial use	
Industrial/Professional use spec:	Industrial	
Use of the substance/mixture:	Rework gel flux	
Function or use category:	Welding and soldering products, flux products	
1.2.2.) Uses advised against	No additional information available.	
1.3.) Details of the supplier of the safety data sheet		
supplier:	**EDSYN GMBH EUROPA**	
address:	Finkenweg 2 Tel.: 09342 - 6413 D 97892 Kreuzwertheim Fax: 09342 - 6417	
1.4.) Emergency telephone number	Toll Free: +1-800-424-9300 Local: +703-527-3887 (CHEMTREC) (USA-Canada-ASIA) 24hr/day 7days/week Chemical Emergency	

Country	**Organisation/Company**	Address	Emergency number	Comment
Germany	Giftnotruf der Charité – Universitätsmedizin Berlin CBF, Haus VIII (Wirtschaftsgebäude); UG	Hindenburgdamm 30 12203 Berlin	+49 (0) 30 19240	
Germany	Informationszentrale gegen Vergiftungen Klinik und Poliklinik für Allgemeine Pädiatrie, Zentrum für Kinderheilkunde, Universitätsklinikum Bonn	Gebäude 30, ELKI (Eltern-Kind-Zentrum) Venusberg-Campus 1 53127 Bonn	+49 (0) 228 19240	
Germany	Giftnotruf Erfurt Gemeinsames Giftinformations-zentrum der Länder Mecklenburg-Vorpommern, Sachsen, Sachsen-Anhalt und Thüringen,	Nordhäuser Straße 74 99089 Erfurt	+49 (0) 361 730 730	

	c/o HELIOS Klinikum Erfurt			
Germany	Vergiftungs-Informations-Zentrale Universitätsklinikum Freiburg, Zentrum für Kinder- und Jugend-Medizin	Breisacher Str. 86b 79110 Freiburg	+49 (0) 761 19240	
Germany	Giftinformationszentrum-Nord der Länder Bremen, Hamburg, Niedersachsen und Schleswig-Holstein (GIZ-Nord) Universitätsmedizin Göttingen – Georg-August-Universität	Robert-Koch-Straße 40 37075 Göttingen	+49 (0) 551 19240	
Germany	Giftinformationszentrum der Länder Rheinland-Pfalz und Hessen Klinische Toxikologie, Universitätsmedizin der Johannes Gutenberg-Universität Mainz	Langenbeckstraße 1 Gebäude 601 55131 Mainz	+ 49 (0) 6131 19240	
Germany	Giftnotruf München Toxikologische Abteilung der II. Med. Klinik und Poliklinik rechts der Isar der Technischen Universität München	Ismaninger Straße 22 81675 München	+ 49 (0) 89 19240	

2.) HAZARDS IDENTIFICATION

2.1.) Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/Irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

Other information

NFPA health hazard:	1 – Materials that, under emergency conditions, can cause significant irritation.
NFPA fire hazard:	1 – Materials that must be preheated before ignition can occur.
NFPA reactivity:	0 – Material that in themselves are normally stable, even under fire conditions.



2.2.) Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

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Hazard pictograms (CLP):	 GHS07
Signal word (CLP):	Warning
Hazard statements (CLP):	**H315** Causes skin irritation. **H319** Causes serious eye irritation.
Precautionary statements (CLP):	**P280** Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. **P302+P352** IF ON SKIN: Wash with plenty of water. **P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
2.3.) Other hazards Other hazards which do not result in classification:	This product may become hazardous in use and the information in this data sheet reflects the hazards associated with solder operations. During soldering operations: Work under local exhaust/ventilation. This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII. This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII. Contains no PBT and/or vPvB substances ≥ 0,1 % assessed in accordance with REACH Annex XIII.

Component	
terpineol, mixture of isomers (232-268-1)	This substance does not meet the PBT criteria of REACH regulation, annex XIII. This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

3.) COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable

3.2.) Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether	CAS N°: 112-34-5 EC N°: 203-961-6 EC index-No.: 603-096-00-8 REACH-no: 01-2119475104-44	20-30	Flam. Liq. Not classified Eye Irrit. 2, H319

terpineol, mixture of isomers	CAS N°: 232-268-1 EC N°: 8000-41-7 REACH-no: 01-2119553062-49	10-20	Flam. Liq. Not classified Skin Irrit. 2, H315 Eye Irrit. 2, H319
Di-carboxylic acidis, di, C4-C6	CAS N°: 68603-87-2 EC N°: 271-678-5 REACH no: 01-2119458864-25	1-5	Eye Dam. 1, H318

Full text of H- and EUH-statements: see section 16

4.1. FIRST AID MEASURES	
4.1.) Description of first aid measures	
First aid measures general:	Never give anything by mouth to an unconscious person. Take the container/vomit to the doctor/hospital.
First aid measures after inhalation:	Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First aid measures after skin contact:	Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.
First aid measures after eye contact:	Rinse immediately with plenty of water. Take victim to an ophthalmologist if irritation persists.
First aid measures after ingestion:	Rinse mouth thoroughly with water. Do NOT induce vomiting. Consult a doctor/medical service if you feel unwell. Doctor: gastric lavage.
4.2.) Most important symptoms and effects, both acute and delayed	
Symptoms/injuries after inhalation:	Provide local exhaust or general room ventilation to minimize mist and/or vapour concentrations.
Symptoms/injuries after skin contact:	Slight irritation.
Symptoms/injuries after eye contact:	Irritation of the eye tissue. ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Redness of the eye tissue.
Symptoms/injuries after ingestion:	Gastrointestinal complaints.
4.3.) Indication of any immediate medical attention and special treatment needed	No additional information available.

5.) FIREFIGHTING MEASURES	
5.1.) Extinguishing media	
Suitable extinguishing media.	Foam, Dry powder. Water spray. Carbon dioxide.
5.2.) Special hazards arising from the substance or mixture	
Fire hazard:	No fire hazard.

Reactivity in case of fire:	On burning: release of (carbon monoxide – carbon dioxide).
5.3.) Advice for firefighters	No additional information available.
6.) <u>ACCIDENTAL RELEASE MEASURES</u>	
6.1.) Personal precautions, protective equipment and emergency procedures	
General measures:	ACCIDENTAL RELEASE OF THE COMPONENTS: Prevent spreading in sewers.
6.1.1.) For non-emergency personnel	
Protective equipment:	Gloves. Protective goggles, protective clothing. Wash hands immediately after handling the product.
6.1.2.) For emergency responders	
Protective equipment:	Refer to section 6.1.1.
6.2.) Environmental precautions	Do not discharge into drains or the environment.
6.3.) Methods and material for containment and cleaning up	
Methods for cleaning up:	Clean contaminated surfaces with alcohol or a soap solution. Take up liquid spill into absorbent material, e.g.: dry sand/earth/vermiculite or powdered limestone.
6.4.) Reference to other sections	No additional information available.
7.) <u>HANDLING AND STORAGE</u>	
7.1.) Precautions for safe handling	
Additional hazards when processed:	During soldering operations: Work under local exhaust/ventilation.
Precautions for safe handling:	Work under local exhaust/ventilation.
Hygiene measures:	Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
7.2.) Conditions for safe storage, including any incompatibilities	
Maximum storage period: Storage temperature: Storage area:	6 months 5 – 35 °C Meet the legal requirements. Store in a dry area. Keep out of direct sunlight.
7.3.) Specific end use(s)	**<u>REACH Disclaimer:</u>** This information is based on current knowledge. Consistency of data in the SDS with CSR is considered, as far as the information is available at the time of compilation (cfr Revision date and Version number).

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8.) EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1) Control parameters

8.1.1.) National occupational exposure and biological limit values

2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (112-34-5)	
EU – Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	67,5 mg/m³ (2-(2-Butoxyethoxy)ethanol; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
	10 ppm (2-(2-Butoxyethoxy)ethanol; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
IOEL STEL	101,2 mg/m³ (2-(2-Butoxyethoxy)ethanol; EU; Short time value; Indicative occupational exposure limit value)
	15 ppm (2-(2-Butoxyethoxy)ethanol; EU; Short time value; Indicative occupational exposure limit value)

8.1.2.) Recommended monitoring Procedure No additional information available

8.1.3.) Air contaminants formed No additional information available

8.1.4.) DNEL and PNEC

Terpineol, mixture of isomers (232-268-1)	
PNEC (Water)	
PNEC aqua (freshwater)	12 µ/l
PNEC aqua (marine water)	1,2 µ/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0,263 mg/kg dwt
PNEC sediment (marine water)	0,026 mg/kg dwt
PNEC (Soil)	
PNEC soil	0,045 mg/kg dwt
PNEC (Oral)	
PNEC oral (secondary poisoning)	16,6 mg/kg food
PNEC (STP)	
PNEC sewage treatment plant	2,57 mg/l

8.1.5.) Control banding No additional information available

8.2.) Exposure controls

8.2.1) Appropriate engineering controls No additional information available

8.2.2.) Personal protective equipment

Personal protective equipment: Gloves. Protective goggles. Protective clothing.

Personal protective equipment symbol(s):



8.2.2.1.) Eye and face protection Safety glasses.

8.2.2.2.) Skin protection	
Hand protection:	The selected protective gloves must meet the specifications of EU Directive 89/686/EEC and EN 374, derived therefrom, nitrile rubber gloves. Recommended thickness: >0,11mm
8.2.2.3.) Respiratory protection	
Respiratory protection:	Local exhaust is needed at source of vapours. During soldering operations.
8.2.2.4.) Thermal hazards	No additional information available
8.2.3.) Environmental exposure controls	No additional information available

9.) PHYSICAL AND CHEMICAL PROPERTIES

9.1.) Information on basic physical and chemical properties

Physical state:	gel
Colour:	clear, light yellow
Appearance:	Viscous. Glossy.
Odour:	Mild odour
Odour threshold:	Not available
Melting point:	Not available
Freezing point:	Not available
Boiling point:	Not available
Flammability:	Not available
Explosive limits:	Not available
Lower explosion limit:	Not available
Upper explosion limit:	Not available
Flash point:	> 140 °C
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
pH:	5 (25% Solution)
Viscosity, kinematic:	Not applicable
Solubility:	Water: Insoluble Ethanol: Partially soluble
Partition coefficient n-octanol/water (Log Kow):	Not available
Partition coefficient n-octanol/water (Log Pow):	0,56 (Experimental value)
Vapour pressure:	Not available
Vapour pressure at 50°C:	Not available
Density:	Not available
Relative density:	1,01g/ml +/-0,01
Relative vapour density at 20°C:	Not available
Particle characteristics:	Not applicable

9.2.) Other information

9.2.1.) Information with regard to physical hazard classes	No additional information available
9.2.2.) Other safety characteristics	No additional information available

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10.) STABILITY AND REACTIVITY	
10.1.) Reactivity	On burning: release of (carbon monoxide – carbon dioxide).
10.2.) Chemical stability	Stable under normal conditions.
10.3.) Possibility of hazardous reactions	No additional information available.
10.4.) Conditions to avoid	All heat sources, including direct sunlight. Temperatures below 5°C
10.5.) Incompatible materials	Keep away from reducing agents (strong) acids/(strong) bases. Keep away from sparks/open flames. Aluminium metals.
10.6.) Hazardous decomposition products	No additional information available.

11.) TOXICOLOGICAL INFORMATION

11.1) Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral):	Not classified
Acute toxicity (dermal):	Not classified
Acute toxicity (inhalation):	Not classified

2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (112-34-5)	
LD50 oral rat	> 5660 mg/kg rat
LD50 dermal rabbit	> 2764 mg/kg (Rabbit; Experimental value, OECD 402: Acute Dermal Toxicity)

Skin corrosion/irritation:	Causes skin irritation. pH: 5 (25% Solution).
Serious eye damage/irritation:	Causes serious eye irritation. pH: 5 (25% Solution).
Respiratory or skin sensitisation:	Not classified
Germ cell mutagenicity:	Not classified
Carcinogenicity:	Not classified
Reproductive toxicity:	Not classified
STOT-single exposure:	Not classified
STOT-repeated exposure:	Not classified
Aspiration hazard:	Not applicable

11.2.) Information on other hazards — No additional information available

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12.) Ecological information	
12.1.) Toxicity	
Ecology – general:	Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008.
Ecology – air:	Not dangerous for the ozone layer (Council Regulation (EC) no 1005/2009). TA-Air class 5.2.1.
Ecology – water:	Ground water pollutant. Not harmful to fishes (LC50(96 h) >1000 mg/l). Slightly harmful to invertebrates (Daphnia) (EC50 48h) >100 mg/l). Practically non-tox to algae (EC50 >100 mg/l). Slightly harmful to bacteria.
Hazardous to the aquatic environment, short-term (acute):	Not classified
Hazardous to the aquatic environment, long-term (chronic):	Not classified

terpineol, mixture of isomers (232-268-1)	
LC50 Fish [1]	62 – 80 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Semi-static system, Fresh water, Experimental value, GLP)
ErC50 algae	68 mg/l (OECD 201: Alga, Growth inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (112-34-5)	
LC50 – Fish [1]	1300 mg/l (LC50; OECD 203: Fish Acute Toxicity Test; 96 h; Lepomis macrochirus; Static system; Fresh water; Experimental value)
EC50 – Crustacea [2]	> 100 mg/l (EC50; OECD 202: Daphina sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static System; Fresh water; Experimental value Wert)

12.2.) Persistence and degradability

FL 22 CL CLEAR BGA Gel Flux	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. No (test)data on mobility of the substances available. Photodegradation in the air.
Chemical oxygen demand (COD)	2,08 g O_2/g substance
terpineol, mixture of isomers (232-268-1)	
ThOD	2,9 g O_2/g substance
2-(2- butoxyethoxy)ethanol; diethylene glycol monobutyl ether (112-34-5)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. No (test)data on mobility of the substances available. Photodegradation in the air.
Biochemical oxygen demand (BOD)	0,25 g O_2/g substance
Chemical oxygen demand (COD)	2,08 g O_2/g substance
ThOD	2,173 g O_2/g substance
BOD (% of ThOD)	0,11

12.3.) Bioaccumulative potential

FL 22 CL CLEAR BGA Gel Flux	
Partition coefficient n-octanol/water (Log Pow)	0,56 (experimental value)
terpineol, mixture of isomers (232-268-1)	
Partition coefficient n-octanol/water (Log Pow)	2,6 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 30°C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4)
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether (112-34-5)	
BCF - Fish [1]	0,46 (BCF)
Partition coefficient n-octanol/water (Log Pow)	0,56 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4)

12.4.) Mobility in soil

terpineol, mixture of isomers (232-268-1)	
Organic Carbon Normalized Adsorption Coeffizient (Log Koc)	1,5 – 1,7 (log Koc, Calculated value)
Ecology - soil	Expected to be highly mobile in soil.
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutylether (112-34-5)	
Surface tension	0,034 N/m (25 °C)

12.5.) Results of PBT and vPvB assessment

FL 22 CL CLEAR BGA Gel Flux
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII.
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII.

12.6.) Endocrine disrupting properties	No additional information available
12.7.) Other adverse effects	No additional information available

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13.) <u>Disposal considerations</u>	
13.1.) Waste treatment methods	
Regional waste regulation:	Disposal must be done according to official regulations.
Product/Packaging disposal recommendations:	Disposal in a safe manner in accordance with local/national regulations. In authorized incinerator equipped with flue gas scrubber with energy recovery. Do not discharge into the sewer. Do not discharge into surface water.
Additional information:	Hazardous waste according to Directive 2008/98/EC.
Ecological waste information:	Remove to an authorized incinerator. Do not discharge into the sewer. Do not discharge into surface water.
EURAL code:	14 06 03* - other solvents and solvent mixtures 15 01 10 * - packaging containing residues or of contaminated by dangerous substances

14.) Transport information	
In accordance with ADR / IMDG / IATA / ADM / RID	
14.1.) UN number or ID number	
UN-No. (ADR):	Not applicable
UN-No. (IMDG):	Not applicable
UN-No. (IATA):	Not applicable
UN-No. (ADN):	Not applicable
UN-No. (RID):	Not applicable
14.2.) UN proper shipping name	
Proper Shipping Name (ADR):	Not applicable
Proper Shipping Name (IMDG):	Not applicable
Proper Shipping Name (IATA):	Not applicable
Proper Shipping Name (ADN):	Not applicable
Proper Shipping Name (RID):	Not applicable
14.3.) Transport hazard class(es)	
ADR Transport hazard class(es) (ADR):	Not applicable
IMDG Transport hazard class(es) (IMDG):	Not applicable
IATA Transport hazard class(es) (IATA):	Not applicable
ADN Transport hazard class(es) (ADN):	Not applicable
RID Transport hazard class(es) (RID):	Not applicable

14.4.) Packaging group	
Packaging group (ADR):	Not applicable
Packaging group (IMDG):	Not applicable
Packaging group (IATA):	Not applicable
Packaging group (AND):	Not applicable
Packaging group (RID):	Not applicable
14.5.) Environmental hazards	
Dangerous for the environment:	No
Marine pollutant:	No
Other information:	No supplementary information available
14.6.) Special precautions for user	
Overland transport:	No data available
Transport by sea:	No data available
Air transport:	No data available
Inland waterway transport:	No data available
Rail transport:	No data available
14.7.) Maritime transport in bulk according to IMO instruments	
Remarks:	Additional rules to be obtained at EDSYN GMBH EUROPA Remark: Above mentioned regulations are in force at the moment of publication of this (SDS) safety data sheet. With reference to possible modifications in transport regulations of dangerous goods, we advise you to verify its validity
15.) <u>Regulatory information</u>	
15.1.) Safety, health and environmental regulations/legislation specific for the substance or mixture	
15.1.1.) EU regulations	Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions). Contains no substance(s) listed on REACH Candidate List. Contains no substance(s) listed on REACH Annex XIV (Authorisation List). Contains no substance(s) listed on PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals). Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer). Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors). Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances).
15.1.2.) National regulations	
Germany	
Water hazard class (WGK):	WGK 1, Slightly hazardous to water Classification according to AwSV,

	Annex 1)
Hazardous Incident Ordinance (12. BImSchV)	Is not subject to the Hazardous Incident Ordinance (12. BImSchV)
15.2.) Chemical safety assessment	No additional information available
16.) Other information	

Full text of H- und EUH-statements:	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. Not classified	Flammable liquids Not classified
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation

Other information:	Intrastat 3810 90 90
Version:	3.0
Revision date:	30.04.2014 / 27.01.2016 / 23.03.2016 / 07.09.23

Safety Data Sheet (SDS), EU -

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

DISCLAIMER OF LIABILITY

The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

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