



EG SAFETY DATA SHEET / MSDS SAFETY DATA SHEET	
1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION	
1.1 Tradename	SPIRFLUX-330
1.2 Application / Use	Water based soft soldering flux
1.3 Manufacturer	Spirig Ernest, Dipl.-Ing. CH-8640 Rapperswil
1.4 Supplier	Spirig Ernest, Dipl.-Ing. CH-8640 Rapperswil
1.5 Emergency PHONE	-
1.6 Product / Manufacturer Ident #	#11226 SX-330-01 in 1 Liter plastic bottle #11227 SX-330-25 in 25 Liter plastic container
2 COMPOSITION, INFORMATION ON INGREDIENTS	
2.1 Chemicals used	Water H ₂ O , Aqua.dest. approx 90 %G Glutamic Acids, various <10 %G Urea and PV-thickening compounds <5 %G Coloring dyes, reddish <0,5 %G
2.2 Dangerous Components	Glutamic acid HOOCCH ₂ CH(NH ₂)COOH Urea CH ₄ N ₂ O
2.2.1 CAS-No.	56-86-0 Glutamic acid 57-13-6 Urea
2.2.2 Risk sets / R-Sets	R20-21-22, R36-37-38
2.3 Additional informations	-
3 HAZARDS IDENTIFICATION	
3.1 Risk description C CORROSIVE	 <p>Elementary hygienic rules must be followed, like reducing exposure to chemicals. Upon exposure or wetting thoroughly rinse / flush with water, skin, eyes, clothes. Follow the Application / Usage notes of the product.</p>
4 FIRST AID MEASURES	
4.1 Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.
4.2 Skin contact	Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse.
4.3 Ingestion	Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
4.4 Inhalation	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
4.5 Additional informations	On any soldering process there will be a flux used to allow the wetting of the substrate with the molten filler metal (solder alloy). Any soldering flux will chemically decomposes in the heat and release or form the active chemicals to remove any oxide layers from base material and solder alloy to allow the wetting process. It is basic industrial habit to intensively ventilate areas where soldering activities are performed.
5 FIRE FIGHTING MEASURES	
5.1 General Information:	This water based fluid is not flammable. Boiling flux fluid will evaporate like water and vapor might carry out more or less traces of the base chemicals contained in the flux fluid.
5.2 Extinguishing Media:	Not flammable.
5.3 Special Information:	Not flammable.

5.4	Autoignition Temperature:	Not flammable.
5.5	Flash Point:	Not flammable.
5.6	Flamable limits in air:	Not flammable.
5.7	NFPA Rating:	Not flammable.
5.8	Explosion Limits,	Not flammable.
6 ACCIDENTAL RELEASE MEASURES		
6.1	General Information:	Use proper personal protective equipment as indicated in Section 8.
6.2	Spills/Leaks:	Action depends on leak or spillage volume. Usual consumption volumes are bottles of 1 liter or containers with 10 liters. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with an inert material (eg, vermiculite, dry sand, earth), and place in a chemical waste container. Flush to sewer and use lots of water to dilute. Flush might be followed with about 0,1 kg of baking soda powder for a neutralizing effect. Large spills might require in certain countries (eg in the US / US Regulations CERCLA) a reporting to authorities. This might differ from country to country.
7 HANDLING and STORAGE		
7.1	Handling:	Protect against physical damage. Store in a cool, dry well-ventilated location. Outside or detached storage is preferred. Separate from incompatibles.
7.2	Storage:	Do not let freeze. Freezing will partially decompose the mixture and make the flux less useful.
8 EXPOSURE CONTROLS, PERSONAL PROTECTION		
8.1	Technical installation	No special efforts. See also Handling.
8.2	MAK values	None established
8.3	Personal Protective Equipment	
		
8.3.1	Eyes	Protective goggles
8.3.2	Skin	Gloves
8.3.3	Clothing	No special protection needed.
8.3.4	Respirators	No
9 PHYSICAL AND CHEMICAL PROPERTIES		
9.1	Physical State:	Liquid
9.2	Appearance:	Clear, slightly reddish colored
9.3	Odor:	None
9.4	pH:	Approx 2, depends on concentration
9.5	Vapor Pressure:	as water
9.6	Vapor Density:	as water vapor
9.7	Evaporation Rate:	as water
9.8	Viscosity:	as water
9.9	Boiling Point:	approx 100 deg °C (147 °F) @ 760.00 mm Hg
9.10	Freezing/Melting Point:	-2 °C

9.11	Decomposition Temperature:	Not available.
9.12	Solubility:	Fully miscible in water
9.13	Specific Gravity/Density:	1,050 g/cm ³
	Molecular Formula:	Mixture of Glutamic acid H ₂ N(CH ₂) ₂ COOH and Urea CH ₄ N ₂ O
	Molecular Weight:	Not available
10	STABILITY AND REACTIVITY	
10.1	Chemical Stability:	Stable at room temperature in closed containers and under normal storage and handling conditions.
10.2	Conditions to Avoid:	Excessive heat
10.3	Incompatibilities with Other Materials:	None known / not available.
10.4	Hazardous Decomposition Products:	None known / not available.
10.5	Hazardous Polymerization:	None known / not available.
11	TOXICOLOGICAL INFORMATION	
11.1	Actual toxicologic	None known / not available.
11.2	Carcinogenicity:	None known / not available. Chemicals not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
11.3	Epidemiology:	None known / not available.
	Teratogenicity:	None known / not available.
	Reproductive Effects:	None known / not available.
	Neurotoxicity:	None known / not available.
	Mutagenicity:	None known / not available.
	Other Studies:	-
12	ECOLOGICAL INFORMATION	
	Ecotoxicity:	None known / not available.
	Environmental Fate:	When released into the soil, this material is expected to readily biodegrade.
13	DISPOSAL CONSIDERATIONS	Dispose of in a manner consistent with federal, state, and local regulations. Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.
13.1	Small Disposal Quantities	Carefully neutralize with baking soda until pH is around 6 - 8. Then add to waste water. Rinse with tap water.
13.2	EG-Disposal Code	Not known.
13.3	CH-Disposal Code	Not known.
13.4	RCRA D-Series Maximum Concentration of Contaminants:	Not listed.
13.5	RCRA D-Series Chronic Toxicity Reference Levels:	Not listed.
13.6	RCRA F-Series:	Not listed.
13.7	RCRA P-Series:	Not listed.
13.8	RCRA U-Series:	Not listed.
14	TRANSPORT INFORMATION	
14.1	US DOT Shipping Name:	Not known.
14.2	Hazard Class:	Not known.
14.3	UN Number:	Not known.
14.4	Packing Group:	Not known.

14.5	IMO Shipping Name:	Not known.
14.6	Hazard Class:	Not known.
14.7	UN Number:	Not known.
14.8	Packing Group:	Not known.
14.9	IATA Shipping Name:	Not known.
14.10	Hazard Class:	Not known.
14.11	UN Number:	Not known.
14.12	Packing Group:	Not known.
14.13	RID/ADR Shipping Name:	Not known.
14.14	Dangerous Goods Code:	Not known.
14.15	UN Number:	Not known.
14.16	Canadian TDG Shipping Name:	Not known.
14.17	Hazard Class:	Not known.
14.18	UN Number:	Not known.
14.19	Other Information:	Not known.
14.20	Labels	Not known.
14.21	Packing Group	Not known.
14.22	Passenger Aircraft	Not known.
14.23	Cargo Aircraft only	Not known.
15	REGULATORY INFORMATION	
15.1	UN-Number	-
15.2	Swiss Norms / Swiss Poison Classification	-
15.3	EG-Number	-
15.4	Symbols	-
		-
15.5	Dangers / Risks	-
	Major Risk Defining Component	-
15.6	R-Sets	R20-21-22, R36-37-38
15.7	S-Sets	-
15.8	MAK Value	-
15.9	BVD Classification	-
15.10	VbF	-
15.11	Further Informations	-
16	ADDITIONAL INFORMATION	-
16.1	MSDS Creation Date: 12/12/1995 Revision dates: 12/12/1997 19/06/2001 This Material Safety Data Sheet is derived from an electronic database.	The information above is believed to be accurate and represents the best information currently available to us. Spirig has searched various database available to the public, like those of Universities and well known chemical supply houses. However, Spirig makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall Spirig be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Spirig has been advised of the possibility of such damages.
	Recommended WEB sites to visit:	
	http://www.cdc.gov/niosh/ipcs/french.html	http://www.cdc.gov/niosh/homepage.html
	http://www.cdc.gov/niosh/ipcsnfrn/nfrnname.html	http://www.cdc.gov/niosh/ipcs/icstart.html
	http://www.cdc.gov/niosh/ipcsnfrn/nfrncas.html	http://www.inchem.org/
	http://www.cdc.gov/niosh/ipcsnfrn/nfrneics.html	http://www.inchem.org/pages/icsc.html
	http://www.cdc.gov/niosh/ipcsnfrn/nfrnicsc.html	http://www.msdsearch.com/DBLinksN.htm
	http://www.cdc.gov/niosh/ipcsnfrn/nfrnrtec.html	http://www.unipv.it/safety/resource/resource.htm

