Product Data Sheet Type: WK800-D-4ml

Group: Mounting

Heat conductive adhesive

Pieces/Unit :	4ml
Container :	Injection
Material :	anaerobic-non toxic

Adhesive or dissipator as a syringe

WK 800 fixes heat sinks to components and parts. It allows parts and components to be stuck even on vertical cooling surfaces, and similarly on metallic housing surfaces, side walls without clamps, screws or other mechanical fixture. Typical applications include adhesion of transformers, microprocessors and other heat-dissipating component and PCBs (Printed Circuit Boards) or coolers. WK 800 is particularly suitable for fixing LED chips on heat sinks.

Max. adhesive gab: 0,25 mm
Shear strenght: 5,5 N/mm2
Tensile strenght :15,2 N/mm2
Thermal expansion coefficient: 110 ppm/K
Thermal conductivity: 0,76 W/mK
Dielectric Strenght: 26,78 kV/mm
Flammability: V-0
Processing temperature: 20-28 °C
Temperature range -55 - +150 °C
Storability temperature: 8 - 28 °C
Storability at 22 °C: min 3 Years
The product can be used after opening for 1 year.

WK 800 has several benefits compared to traditional adhesive compounds such as e.g. thermal hot adhesives or epoxy adhesives. It ensures permanent application with reliable compliance of the thermal and technical properties. The adhesive can be used easily and thus reduces costs in production as well as repair times in service.

Surfaces moistened with WK 800 adhesive or activator can rest for an almost unlimited period of time without the properties of the adhesive location getting deteriorated.

INSTRUCTIONS FOR USE:

Recommended aid: cotton cloth, lint-free, cleaning agent [e.g. toluene, isopropyl alcohol]

Please pay attention to the safety regulations for the solvent. Wear rubber gloves when working for a longer time!

Fertility:
1ml WK800-D = 100cm^2 / at 0,1mm application
1ml WK800-A = 200cm^2 / at 0.1mm application

WK800-D
Rule of thumb: Adhesive quantity per 1 cm2 = 1cm * 1cm * 0.01cm = 0.01cm3 corresponds to 0.01ml
The smallest tube WK800-D (4ml) is sufficient for approx. 400 adhesive surfaces of 1cm2 each
with an assumed adhesive thickness of 0.1mm.

WK800-A
A vial of 10ml (equivalent to 10 cm3) is enough for approx. 2000 adhesions.
1 vial activator (10ml) is enough for 5 tubes Dissipator each 4ml.
The fertility of the activator is therefore at least 2 times higher than that of the adhesive itself.

As soon as you do not apply 0.1mm but 0.2mm, the amount halves.

ALUTRONIC
SOLUTIONS FOR COOL RESULTS

SAFETY DATA SHEET

Issue Date 04-May-2015 **Revision Date** 03-Dec-2015 **Version** 1

1. IDENTIFICATION

Product identifier

Product Name Dissipator 746

Other means of identification

Product Code MS-746
UN/ID no. None
Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Adhesives.
Uses advised against None known

Details of the supplier of the safety data sheet

Manufacturer Address
Hernon Manufacturing Inc.
121 Tech Drive
Sanford, FL 32771
800-527-0004

Emergency telephone number

Company Phone Number 407-322-4000
Emergency Telephone Chemtel 800-255-3924

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Inhalation (Dusts/Mists)	Category 3
Serious eye damage/eye irritation	Category 2
Specific target organ toxicity (single exposure)	Category 3

Label elements

Emergency Overview

Warning

Hazard statements
Causes serious eye irritation
Toxic if inhaled
May cause respiratory irritation. May cause drowsiness or dizziness
Harmful to aquatic life with long lasting effects

Appearance White **Physical state** Paste **Odor** Mild

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not breathe dust/fume/gas/mist/vapors/spray
Wear protective gloves/eye protection/face protection

Precautionary Statements - Response
Get medical advice/attention if you feel unwell
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of water and soap
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash it before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
IF INHALED: Call a POISON CENTER or doctor if you feel unwell

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Skin Contact: May cause allergic skin reaction
Eye Contact: may cause moderate irritation, tearing or redness.

Other Information
Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Chemical Name	CAS No.	Weight-%	Trade Secret
Alumina Trihydrate	21645-51-2	60-100	*
Tetrahydrofurfuryl methacrylate	2455-24-5	10-20	*
Elastomer	249347-78-8	5-10	*
Hydroxyalkyl Methacrylate	27813-02-1	5-10	*
Cumene Hydroperoxide	80-15-9	1-3	*
Saccharin	81-07-2	1-3	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact Wash with soap and water. Flush skin with water for several minutes. Remove contaminated clothing and shoes. If irritation develops, seek medical attention. Wash clothing before reuse.

Inhalation Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.

Ingestion Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a POISON CENTER or doctor/physician if you feel unwell.

Most important symptoms and effects, both acute and delayed

Symptoms Avoid prolonged contact with eyes, skin, and clothing.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use CO2, dry chemical, or foam.

Unsuitable extinguishing media None.

Specific hazards arising from the chemical
No information available.

Hazardous combustion products Carbon oxides. Nitrogen oxides (NOx). Irritating organic vapors.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions Do not allow into any sewer, on the ground or into any body of water. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Soak up with inert absorbent material. Store in a closed container until ready for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists. Wash thoroughly after handling. Ensure adequate ventilation, especially in confined areas.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep at temperatures between 7 and 29 °C.

Incompatible materials Strong oxidizers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Alumina Trihydrate 21645-51-2	TWA: 1 mg/m^3 respirable fraction	-	-

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear protective gloves and protective clothing. Wear protective nitrile rubber gloves.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Paste
Appearance No information available
Color White
Odor Mild
Odor threshold No information available

Property	Values	Remarks • Method
pH	Does not apply	
Melting point / freezing point	No information available	
Boiling point / boiling range	> 149 °C / 300 °F	
Flash point	> 93 °C / > 200 °F	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	Not available	
Lower flammability limit:	Not available	
Vapor pressure	< 5mm @ 80° F	

Vapor density	No information available
Relative density	1.60
Water solubility	slightly soluble
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions.
Possibility of Hazardous Reactions
None under normal processing.
Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid
Incompatible materials.
Incompatible materials
Strong oxidizers.
Hazardous Decomposition Products
Carbon oxides. Nitrogen oxides (NOx). Irritating organic vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation May cause irritation of respiratory tract.

Eye contact May cause irritation.

Skin contact Substance may cause slight skin irritation.

Ingestion Ingestion may cause irritation to mucous membranes.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Alumina Trihydrate 21645-51-2	> 5000 mg/kg (Rat)	-	-
Hydroxyalkyl Methacrylate 27813-02-1	= 11200 mg/kg (Rat)	> 3000 mg/kg (Rabbit)	-
Cumene Hydroperoxide 80-15-9	= 382 mg/kg (Rat)	= 0.126 mL/kg (Rabbit)	= 220 ppm (Rat) 4 h

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity No information available.

Chemical Name	ACGIH	IARC	NTP	OSHA
Saccharin 81-07-2	-	Group 3	-	-

Reproductive toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document.

ATEmix (oral) 4,178.00 mg/kg
ATEmix (dermal) 22,222.00 mg/kg
ATEmix (inhalation-dust/mist) 25.00 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Tetrahydrofurfuryl methacrylate 2455-24-5	-	31.1 - 38.8: 96 h Pimephales promelas mg/L LC50 flow-through	-
Hydroxyalkyl Methacrylate 27813-02-1	-	493: 48 h Leuciscus idus melanotus mg/L LC50 static	-
Cumene Hydroperoxide 80-15-9	-	3.9: 96 h Oncorhynchus mykiss mg/L LC50 static	7: 24 h Daphnia magna mg/L EC50
Saccharin 81-07-2	-	18300: 96 h Pimephales promelas mg/L LC50	-

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Chemical Name	Partition coefficient
Hydroxyalkyl Methacrylate 27813-02-1	0.97

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Cumene Hydroperoxide 80-15-9	-	-	-	U096

Chemical Name	California Hazardous Waste Status
Cumene Hydroperoxide 80-15-9	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT Not regulated
- **UN/ID no.** None
- **Proper shipping name** Not regulated
- **Hazard Class** None
- **Packing Group** None
- **Special Provisions** None

IATA Not regulated
- **UN/ID no.** None
- **Proper shipping name** Not regulated
- **Hazard Class** None
- **Packing Group** None
- **Special Provisions** None

IMDG Not regulated
- **UN/ID no.** None
- **Proper shipping name** Not regulated
- **Hazard Class** None
- **Packing Group** None
- **Special Provisions** None

RID Not regulated
- **UN/ID no.** None
- **Proper shipping name** Not regulated
- **Hazard Class** None
- **Packing Group** None
- **Special Provisions** None

ADR Not regulated
- **UN/ID no.** None
- **Proper shipping name** Not regulated
- **Hazard Class** None
- **Packing Group** None
- **Special Provisions** None

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies

AICS Complies

All ingredients are on the inventory or are exempt from listing.

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
Cumene Hydroperoxide - 80-15-9	1.0
Saccharin - 81-07-2	1.0

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Cumene Hydroperoxide 80-15-9	10 lb	-	RQ 10 lb final RQ RQ 4.54 kg final RQ

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Cumene Hydroperoxide 80-15-9	X	X	X
Saccharin 81-07-2	X	X	X

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards** 0	**Flammability** 0	**Instability** 0	**Physical and Chemical Properties** -
HMIS	**Health hazards** 2	**Flammability** 1	**Physical hazards** 1	**Personal protection** X

Prepared By	SDS coordinator
Issue Date	04-May-2015
Revision Date	03-Dec-2015

Revision Note

No information available

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet