SAFETY DATA SHEET

LANXESS
Energizing Chemistry

Section 1. Identification

Product identifier	:	BAYOXIDE E 8600/A
Material Number	:	05734010
Chemical family	:	Inorganic Metal oxide.
Identified uses	:	Inorganic pigment
Supplier/Manufacturer	:	LANXESS Corporation Product Safety & Regulatory Affairs 111 RIDC Park West Drive Pittsburgh, PA 15275-1112 USA For information: US/Canada (800) LANXESS International +1 412 809 1000
In case of emergency	:	Chemtrec (800) 424-9300 International (703) 527-3887 Lanxess Emergency Phone (800) 410-3063.

Section 2. Hazards identification

HAZCOM Standard Status	:	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), the SDS contains valuable information critical to the safe handling and proper use of the product. The SDS should be retained and available for employees and other users of this product.
Physical state	:	Powder.
Color	:	Black.
Classification of the substance or mixture	:	Not classified.
Signal word	:	No signal word.
Hazard statements	:	No known significant effects or critical hazards.
Hazard Not Otherwise Classified (HNOC)	:	None known.
Precautionary statements		
Prevention	:	Not applicable.
Response	:	Not applicable.
Storage	:	Not applicable.
Disposal	:	Not applicable.
Supplemental label elements	:	Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink.

Section 3. Composition/information on ingredients

Substance/mixture : Substance

Ingredient name	%	CAS number

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Section 3. Composition/information on ingredients

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of first aid measures

Eye contact	:	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	:	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	:	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Potential acute health effects

Eye contact	:	May cause mechanical irritation (abrasion).
Inhalation	:	No known significant effects or critical hazards.
Skin contact	:	May cause mechanical irritation (abrasion).
Ingestion	:	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	:	No specific data.
Inhalation	:	No specific data.
Skin contact	:	No specific data.
Ingestion	:	No specific data.

Potential chronic health effects

No known significant effects or critical hazards.

Notes to physician	:	Treat symptomatically. No specific treatment.
Protection of first-aiders	:	No special measures required.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	:	Use an extinguishing agent suitable for the surrounding fire. In case of fire, use water spray (fog), foam or dry chemical.
Unsuitable extinguishing media	:	None known.
Specific hazards arising from the chemical	:	No specific fire or explosion hazard.
Hazardous thermal decomposition products	:	No specific data.
Special protective actions for fire-fighters	:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing dust. Put on appropriate personal protective equipment.
Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods and materials for containment and cleaning up	:	Move containers from spill area. Approach release from upwind. Vacuum or sweep up material and place in a designated, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. Prevent entry into sewers, water courses, basements or confined areas.

Section 7. Handling and storage

Precautions for safe handling

Protective measures	:	Avoid breathing dust. Remove contaminated clothing and protective equipment before entering eating areas. Workers should wash hands and face before eating, drinking and smoking. Put on appropriate personal protection equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Conditions for safe storage	:	Do not store near sources of heat (furnaces, kilns, boilers, etc.). Exposure to excessive heat may cause this product to become unstable (slowly auto-oxidize) which generates additional heat. Under certain circumstances this heat generation may be sufficient to cause combustible materials to ignite. Do not store near strong oxidizers, sources of heat, or near flammable or combustible materials. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Empty containers or liners may retain some product residues.

Section 8. Exposure controls/personal protection

Occupational exposure limits

No exposure limit value known.

Appropriate engineering controls	:	Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal protection

Hygiene measures	:	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Respiratory protection	:	Dust-protection mask
Skin protection	:	Wear suitable protective clothing and gloves. Suitable protective footwear.
Eye/face protection	:	If contact with product is possible, wear safety glasses with side shields.
Medical Surveillance	:	Not available.

Section 9. Physical and chemical properties

Physical state	:	Solid. [Powder.]
Color	:	Black.
Odor	:	Odorless.
Odor threshold	:	Not available.
pH	:	4 to 8 [Conc. (% w/w): 5%]
Boiling point	:	Not available.
Melting point	:	>1000°C (>1832°F)
Flash point	:	Not available.
Evaporation rate	:	Not available.
Explosion limits	:	Not available.
Vapor pressure	:	Not available.
Specific gravity (Relative density)	:	4 to 5
Bulk density	:	300 to 1000 kg/m³
Solubility	:	Insoluble in the following materials: cold water
Partition coefficient: n-octanol/water	:	Not available.
Vapor density	:	Not available.
Viscosity	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Excessive temperatures. At temperatures greater than 176 F (80 C), this product may become unstable and slowly auto-oxidize into Fe2O3 which generates additional heat. Under certain conditions this heat may be sufficient to cause combustible materials to ignite.
Incompatible materials	:	No specific data.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on the likely routes of exposure : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact	:	May cause mechanical irritation (abrasion).
Inhalation	:	No known significant effects or critical hazards.
Skin contact	:	May cause mechanical irritation (abrasion).
Ingestion	:	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	:	No specific data.
Inhalation	:	No specific data.
Skin contact	:	No specific data.
Ingestion	:	No specific data.

Potential chronic health effects

Short term exposure

Section 11. Toxicological information

Potential immediate effects : Not available.

Long term exposure

Potential delayed effects : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure	Test
C.I. Pigment Black 11	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation	Reversibility
C.I. Pigment Black 11	Skin - Erythema/Eschar	Rabbit	0	4 hours	8 days	-
	Eyes - Cornea opacity	Rabbit	0	192 hours 100 µl	8 days	Fully reversible in 7 days or less
	Eyes - Iris lesion	Rabbit	0	192 hours 100 µl	8 days	-
	Eyes - Redness of the conjunctivae	Rabbit	0	192 hours 100 µl	8 days	Fully reversible in 7 days or less

Conclusion/Summary

Skin : C.I. Pigment Black 11:Non-irritating

Eyes : C.I. Pigment Black 11:Non-irritating

Sensitization

Product/ingredient name	Route of exposure	Species	Result
C.I. Pigment Black 11	skin	Guinea pig	Not sensitizing

Chronic toxicity

Product/ingredient name	Result	Species	Dose	Exposure
C.I. Pigment Black 11	Sub-acute LOAEL Inhalation Dusts and mists	Rat - Male	>185.6 mg/m³	2 weeks; 6 hours per day 5 days per week

Mutagenicity

Section 11. Toxicological information

Product/ingredient name	Test	Experiment	Result
C.I. Pigment Black 11	Ames test	Experiment: In vitro Subject: Bacteria Metabolic activation: with/without S9 mix	Negative
	OECD 476 *In vitro* Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic Metabolic activation: with/without S9 mix	Negative
	OECD 473 *In vitro* Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic Metabolic activation: with/without S9 mix	Negative

Carcinogenicity

Product/ingredient name	Result	Species	Dose	Exposure
C.I. Pigment Black 11	Negative - Intraperitoneal -	Rat - Male, Female	600 mg/kg	914 days; 3 Injection (200mg/kg) / 8weeks

Product/ingredient name	CAS #	IARC	NTP	OSHA
C.I. Pigment Black 11	1317-61-9	Not classified.	Not classified.	Not classified.

Section 12. Ecological information

Toxicity

Product/ingredient name	Test	Result	Species	Exposure
C.I. Pigment Black 11	EU C.2 (Acute Toxicity for Daphnia)	Acute EC0 >10000 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute EC50 >10000 mg/l Fresh water	Bacteria - adapted and activated sludge micro-organism	3 hours
	OECD 203 Fish, Acute Toxicity Test	Acute LC0 >10000 mg/l Fresh water	Fish - Danio rerio	96 hours

Conclusion/Summary : Not available.

Persistence and degradability

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
BAYOXIDE E 8600	-	-	Not readily

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods	:	The generation of waste should be avoided or minimized wherever possible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Waste disposal should be in accordance with existing federal state, provincial and or local environmental controls laws.
RCRA classification	:	If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	-	-	-	-		Not regulated.
IMDG Class	-	-	-	-		Not regulated.
IATA-DGR Class	-	-	-	-		Not regulated.

PG* : Packing group

RQ : 0 lbs

Section 15. Regulatory information

SARA 311/312	:	None
SARA Title III Section 302 Extremely Hazardous Substances	:	None
SARA Title III Section 313 Toxic Chemicals	:	None
US EPA CERCLA Hazardous Subtances (40 CFR 302.4)	:	None

State regulations

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections on the SDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropraite agency in your state.

Ingredient name	CAS number	State Code	Concentration (%)

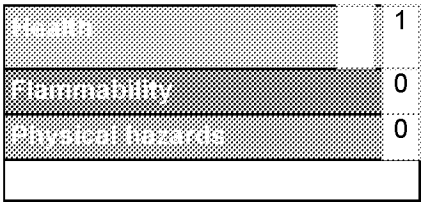
Massachusetts Substances: MA - S
Massachusetts Extraordinary Hazardous Substances: MA - Extra HS
New Jersey Hazardous Substances: NJ - HS
Pennsylvania RTK Hazardous Substances: PA - RTK HS
Pennsylvania Special Hazardous Substances: PA - Special HS

California Prop. 65

Potential exposure to some or all of the California Proposition 65 chemicals in this product have been determined to be below the No Significant Risk Level (NSRL)

U.S. Toxic Substances Control Act : Listed on the TSCA Inventory.

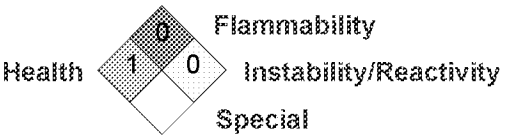
Section 16. Other information

Hazardous Material Information System : 

0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme
***=Chronic**

The customer is responsible for determining the PPE code for this material. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.) :



0= Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

LANXESS' method of hazard communication is comprised of Product Labels and Safety Data Sheets. HMIS and NFPA ratings are provided by LANXESS as a customer service.

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Product Safety and Regulatory Affairs

Indicates information that has changed from previously issued version.

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