

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Name : AO 688

1.2. Recommended use and restrictions on use

Recommended use : Stabilisers, Rubbers
Restrictions on use : Any use not specified

1.3. Supplier

Western Reserve Chemical Corporation
4837 Darrow Road
Stow, OH 44224 - USA
T 330 650 2244 - F 330 650 2255
www.wrchem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC 1 800 424 9300 USA; 800-681-9531 Mexico

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Acute toxicity (oral), Category 4 H302 Harmful if swallowed.
Skin sensitisation, Category 1 H317 May cause an allergic skin reaction.

Full text of H- statements: see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS) :



Signal word (GHS) : Warning
Hazard statements (GHS_US) : H302 - Harmful if swallowed.
H317 - May cause an allergic skin reaction.
Precautionary statements (GHS) : P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P272 - Contaminated work clothing must not be allowed out of the workplace.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.
P302+P352 - If on skin: Wash with plenty of water.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P330 - Rinse mouth.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P363 - Wash contaminated clothing before reuse.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No data available

2.4. Unknown acute toxicity (GHS_US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

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Name	Product identifier	%	GHS US classification
N-1-methylheptyl-N'-phenyl-p-phenylenediamine	(CAS-No.) 15233-47-3	≥ 96	Acute Tox. 4 (Oral), H302 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
N-(4-aminophenyl)aniline	(CAS-No.) 101-54-2	≤ 1	Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of hazard classes, H- statements: see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- First-aid measures after skin contact : Wash skin thoroughly with mild soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER/doctor if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after skin contact : May cause an allergic skin reaction. Redness. Skin rash/inflammation.
- Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : None known.

5.2. Specific hazards arising from the chemical

- Fire hazard : No particular fire or explosion hazard. Carbon oxides (CO, CO₂). Nitrogen oxides.

5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear a self contained breathing apparatus. Wear fire/flame resistant/retardant clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Do not breathe vapour. Do not get in eyes, on skin, or on clothing. Do NOT taste or swallow. Do not touch spilled material.

6.1.1. For non-emergency personnel

- Protective equipment : Refer to section 8.2.
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Refer to section 8.2.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or

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streams.
Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe vapours. Do not get in eyes, on skin, or on clothing. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container. Keep container closed when not in use.

Incompatible products : Strong oxidizers.

Incompatible materials : Sources of ignition. Direct sunlight.

Storage area : Store in dry, cool, well-ventilated area.

Packaging materials : Storage in galvanized metal recommended.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No data available

8.2. Appropriate engineering controls

Appropriate engineering controls : Avoid splashing. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Either local exhaust or general room ventilation is usually required.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear suitable gloves resistant to chemical penetration. Nitrile rubber gloves. Butyl rubber gloves

Eye protection:

None under normal use. In case of splashing or aerosol production: protective goggles.

Skin and body protection:

Long sleeved protective clothing

Respiratory protection:

No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Viscous.

Colour : dark brown

Odour : aromatic

Odour threshold : No data available

pH : No data available

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Melting point	: No data available
Freezing point	: No data available
Boiling point	: 430 °C
Flash point	: 185 °C
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.003 g/cm ³
Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Direct sunlight. Heat.

10.5. Incompatible materials

Strong oxidizers.

10.6. Hazardous decomposition products

None under normal use.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

ATE (oral)	493.333 mg/kg bodyweight
N-(4-aminophenyl)aniline (101-54-2)	
LD50 Oral rat	370 mg/kg bodyweight
LD50 Dermal rabbit	> 5000 mg/kg bodyweight
ATE (oral)	370 mg/kg bodyweight
N-1-methylheptyl-N'-phenyl-p-phenylenediamine (15233-47-3)	
ATE (oral)	500 mg/kg bodyweight

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: May cause an allergic skin reaction.

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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 classified
Viscosity, kinematic	: No data available
Likely routes of exposure	: Inhalation. Skin and eye contact.
Symptoms/effects after skin contact	: May cause an allergic skin reaction. Redness. Skin rash/inflammation.
Symptoms/effects after ingestion	: Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Very toxic to aquatic life with long lasting effects.

N-(4-aminophenyl)aniline (101-54-2)	
LC50 fish 1	1.9 mg/l 96 h
EC50 crustacea	0.29 mg/l 48 h

12.2. Persistence and degradability

AO 688	
Persistence and degradability	May cause long-term adverse effects in the environment.

N-(4-aminophenyl)aniline (101-54-2)	
Persistence and degradability	Not readily biodegradable.

12.3. Bioaccumulative potential

AO 688	
Bioaccumulative potential	Not established.

N-(4-aminophenyl)aniline (101-54-2)	
BCF fish 1	0
Bioconcentration factor (BCF REACH)	7
Log Pow	1.82
Bioaccumulative potential	Not expected to bioaccumulate.

12.4. Mobility in soil

AO 688	
Ecology - soil	Not established.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Sewage disposal recommendations	: Do not dispose of waste into sewer.
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated.

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Transport by sea

Transport document description (IMDG)	: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (N-1-methylheptyl-N'-phenyl-p-phenylenediamine), 9, III, MARINE POLLUTANT
UN-No. (IMDG)	: 3082
Proper Shipping Name (IMDG)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Class (IMDG)	: 9 - Miscellaneous dangerous substances and articles
Packing group (IMDG)	: III - substances presenting low danger
Limited quantities (IMDG)	: 5 L

Air transport

Transport document description (IATA)	: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (N-1-methylheptyl-N'-phenyl-p-phenylenediamine), 9, III
UN-No. (IATA)	: 3082
Proper Shipping Name (IATA)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Class (IATA)	: 9 - Miscellaneous Dangerous Substances and Articles
Packing group (IATA)	: III - Minor Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed as Active, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

N-(4-aminophenyl)aniline (101-54-2)

Listed on the Canadian DSL (Domestic Substances List) inventory.

N-1-methylheptyl-N'-phenyl-p-phenylenediamine (15233-47-3)

Listed on the Canadian DSL (Domestic Substances List) inventory.

National regulations

N-(4-aminophenyl)aniline (101-54-2)

Listed on KECI (Korean Existing Chemicals Inventory)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the AICS (Australian Inventory of Chemical Substances)

N-1-methylheptyl-N'-phenyl-p-phenylenediamine (15233-47-3)

Listed on KECI (Korean Existing Chemicals Inventory)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the AICS (Australian Inventory of Chemical Substances)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm.

SECTION 16: Other information

Data sources	: European Chemicals Agency (ECHA) C&L Inventory database. Accessed at http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database . European Chemicals Agency (ECHA) Registered Substances list. Accessed at http://echa.europa.eu/ . GHS Mexico. Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition. Manufacturer Information. National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th edition. OSHA 29CFR 1910.1200 Hazard Communication Standard. TSCA Chemical Substance Inventory. Accessed
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at <http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html>.

Other information

: None.

Full text of H-statements:

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Abbreviations and acronyms:

	ATE: Acute Toxicity Estimate
	CAS (Chemical Abstracts Service) number
	EC50: Environmental Concentration associated with a response by 50% of the test population.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	LD50: Lethal Dose for 50% of the test population
	STEL: Short Term Exposure Limits
	TSCA: Toxic Substances Control Act
	TWA: Time Weighted Average

NFPA health hazard

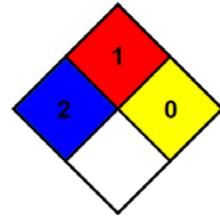
: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard

: 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and not reactive with water.



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.