SAFETY DATA SHEET

D-GASSER - 601 TABLET

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	D-GASSER – 601
Synonyms:	N/A
Active ingredient:	Sodium Nitrate, Hexachloroethane
CAS-No. :	Sodium Nitrate: 7631-99-4 Hexachloroethane: 67-72-1
Recommended use(s) of the chemical and restrictions on use:	Tablet for use in foundry industry for degassing Aluminum alloys, low smoke.
Supplier's details:	Skyline Chemical Corp. P.O. Box 53663, Irvine, California 92619 Tel +1-714-290-8866
Emergency phone number:	CHEMTREC 1-800-424-9300 or +1-703-741-5500 (24 hour emergency response number)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Hazard statement(s)

Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Carcinogen	Carcinogenicity
Eye Irritant	Eye irritation

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects

2.2 GHS Label elements

Hazard pictograms

Signal word Warning

Hazard statement(s):

H272	May intensify fire, Oxidizer.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statement(s):

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/ eye protection/ face protection.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	If exposed or concerned: Get medical advice/ attention.
P321	Specific treatment (see supplemental first aid instructions on this label).
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P362	Take off contaminated clothing and wash before reuse.
P391	Collect spillage.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS:

NFPA Rating	
Health	2
Fire	0
Reactivity	1
Special	Oxidizer

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Component(s) : Sodium Nitrate, Hexachloroethane, Potassium Chloride, Sodium Chloride, Grog, Graphite

Ingredient	CAS #	Percent range
Sodium Nitrate	7631-99-4	<30%
Hexachloroethane	67-72-1	<30%
Potassium Chloride	7447-40-7	5-15%
Sodium Chloride	7647-14-5	5-25%
Grog (Alumina / Silica)	1344-28-1	10-30%
Natural Graphite	7782-42-2	1-5%

4. FIRST-AID MEASURES

4.1 Description of first aid measures

General advice: Consult a physician. Provide this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed:

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in Section 11.

4.3 Indication of any immediate medical attention and special treatment needed
If medical advice is needed, have safety data sheet available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides, Hydrogen chloride gas, Nitrous oxide.

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas.
Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into
The environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Use with adequate ventilation.
Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse. Immediately change contaminated clothing.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
Storage area: Store away from heat.
Packaging: Keep container closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Components with workplace control parameters

Components	CAS No.	Value	Control Parameter	Basis
Sodium Nitrate	7631-99-4	TWA	NA	OSHA PEL/ACGIH TLV: NA

Components	CAS No.	Value	Control Parameter	Basis
Hexachloroethane	67-72-1	TWA	1 ppm	USA. ACGIH Threshold limit values (TLV)
	Remark	Liver & kidney damage Confirmed animal carcinogen with unknown relevance to humans Danger of cutaneous absorption.		
		TWA	1ppm 10mg/ m^3	USA. NIOSH Recommended Exposure Limited.
		Potential Occupational Carcinogen See Appendix C See Appendix A Potential for dermal absorption		
		TWA	1ppm 10mg/ m^3	USA. Occupational Exposure Limited. (OSHA) – Table Z-1 Limited for Air Contaminants.
		Skin designation The value in mg/ m^3 approximate.		
		TWA	1ppm 10mg/ m^3	USA. OSHA –TABLE Z-1 Limited for Air Contaminants -1910.1000
		Skin Notation		

Components	CAS No.	Value	Control Parameter	Basis
Potassium Chloride	7447-40-7	TWA	NA	OSHA PEL/ACGIH TLV: NA

Components	CAS No.	Value	Control Parameter	Basis
Sodium Chloride	7647-14-5	TWA	NA	OSHA PEL/ACGIH TLV: NA

Components	CAS No.	Value	Control Parameter	Basis
Grog powder	1344-28-1	TWA	10mg/m^3	OSHA PEL

Components	CAS No.	Value	Control Parameter	Basis
Graphite powder	7782-42-5	TWA IDLH	2mg/ m^3 2.5mg/ m^3 2.5mg/ m^3 1250mg/m^3	ACGIH TLV OSHA PEL NIOSH IDLH

8.2 Exposure controls

Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection: Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection: Impervious clothing, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls if the respirator is the sole means of protection use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Environmental exposure controls: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on physical and chemical properties

• Appearance	Form: Tablet Color: Black
• Odor	Typical camphor
• Odor threshold	No data available
• pH	No data available
• Melting point	No data available
• Initial boiling point/range	No data available
• Flash point	No data available
• Evaporation rate	No data available
• Flammability (solid, gas)	No data available
• Vapor pressure	0.5 hPa (0.4 mmHg) at 20.0 °C (68.0 °F)
• Vapor density	No data available
• Relative density	2.081 g/mL at 25 °C (77 °F)
• Water solubility	Partly soluble
• Auto-ignition	No data available
• Decomposition	No data available
• Viscosity	No data available
• Explosive properties	No data available
• Oxidizing properties	No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity: No data available
10.2 Chemical stability: Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions: Risk of ignition or formation of inflammable gases or vapors with Butadiene.
10.4 Conditions to avoid: High temperatures, incompatible materials, exposure to air, combustible materials, organic material, exposure to moist air or water.
10.5 Incompatible materials: A risk of explosion and/or of toxic gas formation exists with the following substances: Strong reducing agents, strong acids, amines, chlorates, finely powdered metals, hydrazine, liquid ammonia, amides (eg butyramide, diethyltoluamide, dimethyl formamide), cyanides, permanganates, hypophosphite, sulfites, tannic acid, carbon, antipyrine, sodium thiosulfate, ammonium salts, cellulose, acetanilide, iodides, mercury salts.
10.6 Hazardous decomposition products: Hazardous decomposition products formed under fire conditions - Nitrogen oxides (NOx), sodium oxides, CO, CO_2, hydrogen chloride gas & phosgene gas
In the event of fire: see section 5
10.7 Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Sodium Nitrate:
Acute toxicity
LD50 Oral - RAT - 1267mg/kg
LD50 Oral - RBT - 2680 mg/kg
ORL-CHD LDLO 22.5 mg kg-1

Acute oral toxicity
ORL-MAN LD50 114 mg/kg
ORL-CHD LD50 22500 mg/kg
Acute inhalation toxicity : LC50 rat Dose: 5.5 mg/l, 4 h (RTECS)
Irritation of the eyes : Causes irritation
Irritation of the skin : Causes irritation
RTECS#: WC5600000

Carcinogenicity: Not listed by ACGIH, IARC, NIOSH, NTP or OSHA
Potential health effects:
Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion: Toxic if swallowed.
Skin: May be harmful if absorbed through skin. May cause skin irritation.
Eyes: May cause eye irritation.

Hexachloroethane:
Acute toxicity
LD50 Oral - guinea pig - 4,970 mg/kg
TDLo Oral - rat - female - 5,500 mg/kg
TDLo Oral - rat - 6,944 mg/kg
Remarks: Liver: Changes in liver weight. Kidney, Ureter, Bladder: Changes in tubules (including acute renal failure, acute tubular necrosis). Kidney, Ureter, Bladder: Other changes.

TDLo Oral - rat - 48,750 mg/kg
Remarks: Brain and Coverings: Other degenerative changes. Liver: Changes in liver weight.
Kidney, Ureter, Bladder: Other changes.

TDLo Oral - rabbit - 12,000 mg/kg
Remarks: Liver: Other changes. Kidney, Ureter, Bladder: Other changes. Nutritional and Gross Metabolic: Weight loss or decreased weight gain.
Inhalation: Behavioral muscle weakness.

LD50 Dermal - rabbit - 32,000 mg/kg
LD50 Intraperitoneal - mouse - 4,500 mg/kg
LDLO Intraperitoneal - rat - 2,900 mg/kg
LDLO Intravenous - dog - 325 mg/kg

Skin corrosion/irritation: No data available

Serious eye damage/eye irritation: No data available

Respiratory or skin sensitization: No data available

Germ cell mutagenicity: Hamster - ovary
Sister chromatid exchange

Carcinogenicity: This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

Limited evidence of carcinogenicity in animal studies

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Hexachloroethane)

NTP: Reasonably anticipated to be a human carcinogen (Hexachloroethane)

Reproductive toxicity: No data available
Specific target organ toxicity - single exposure: No data available
Aspiration hazard: No data available

GROG POWDER:
This product (and all of it's components) is in compliance with the U.S. EPA 15 U.S. C.2604 regulation.

GRAPHITE POWDER:

Acute Toxicity

Product Information: No acute toxicity information is available for this product

Component Information

Toxicologically Synergistic Products: No information available

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

Irritation Irritating to eyes and respiratory system

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

COMPONENT	CAS NO.	IARC	NTP	ACGIH	OSHA	MEXICO
GRAPHITE	7782-42-5	Not listed	Not listed	Not listed	Not listed	Not listed
QUARTZ	14808-60-7	Group 1	Known	A2	X	Not listed

IARC: (International Agency for Research on Cancer) IARC: (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Human

NTP: (National Toxicity Program)

NTP: (National Toxicity Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists)

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - **single exposure** Respiratory system

STOT - **repeated exposure** Lungs

Aspiration hazard No information available

Symptoms/ effects both acute and delayed No information available

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. ECOLOGICAL INFORMATION

Sodium Nitrate

Toxicity

Acute aquatic toxicity Fish	LC50 96 h fish(mg,l-1) : 11060 ppm(stickleback) BOD 0.1 kg/kg
WGK	WGK 1 slightly water endangering
Persistence and degradability	
Biodegradability	The methods for determining the biological degradability are not applicable to inorganic substances. Partition coefficient: n-octanol/water: Log Pow: -3.7 Method: OECD Test guideline 107 No bioaccumulation is to be expected (log Pow<1)
Additional ecological information	Do not allow to enter water, waste water, or soil.
Other adverse effects	Very toxic to aquatic organisms

Hexachloroethane

Toxicity

Toxicity to fish: NOEC - Cyprinodon variegatus (sheepshead minnow) - 1 mg/l - 96h

Toxicity to daphnia and other aquatic invertebrates: LC50 - Daphnia magna (Water flea) - 1.36 mg/l - 48 h

Persistence and degradability

Biodegradability (OECD Test Guideline 301): Result: - Not biodegradable

Bioaccumulative potential

Bioaccumulation: Lepomis macrochirus (Bluegill) - 28 d - 0.00617 mg/l

Bioconcentration factor (BCF): 139

Mobility in soil: No data available

Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic life with long lasting effects.

No data available

Potassium Chloride

Toxicity

EC50 Daphnia 1: 825 mg/l

Persistence and degradability: Not established.

Bioaccumulative potential: Not established.

Mobility in soil: No additional information available

Other adverse effects: Avoid release to the environment.

Sodium Chloride

Toxicity

Routes of Entry: Inhalation, Ingestion.

Toxicity to Animals: The LC50 values below are estimated on the basis of a 4-hour exposure:

Acute oral toxicity (LD50): 3000 mg/kg [Rat.]

Acute dermal toxicity (LD50): >10000 mg/kg [Rabbit]

Acute toxicity of the dust (LC50): >42000 mg/m3 1 hours [Rat]

Chronic Effects on Humans:

MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Lowest Published Lethal Dose (LDL) [Man] - Route: Oral; Dose: 1000 mg/kg

Grog powder

Toxicity

Ecotoxicity: Do not empty into drains

Persistence and Degradability: No information available

Bioaccumulation/Accumulation: No information available

Mobility: No information available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an after burner and scrubber.

Contaminated packaging

Dispose of as unused product.

Waste Disposal Method: Waste disposal should be in accordance with existing federal, state and local environmental regulations.

14. TRANSPORT INFORMATION

14.1. UN number

ADR/RID: 1498 IMDG: 1498 IATA: 1498

UN Number: 1498
Class: 5.1
P.G.: III

Proper Shipping Name

ADR/RID: Sodium Nitrate, Oxidizer
IMDG: Sodium Nitrate, Oxidizer
IATA: Sodium Nitrate, Oxidizer

Transport hazard class(es)

ADR/RID: 5.1 IMDG: 5.1 IATA: 5.1

Packing group

ADR/RID: III IMDG: III IATA: III

EmS: Fire F-A Spill S-Q

15. REGULATORY INFORMATION

Risk phases : R22 Harmful if swallowed.

Safety Phases : S22 Do not inhale dust.
S24/25 Avoid contact with skin and eyes.

16. OTHER INFORMATION

Date prepared: May 29, 2015

The information provided above is believed to be accurate and represent the best and most recent information currently available to us. However we make no guarantee/warranty or implant ability or any other warranty, expressed or implied and we assume no liability resulting from its use, handling or contact with the above product. Users should make their own investigations to determine the suitability of the information for their particular purposes. Information provided in this document is based on present knowledge available and is applicable to the product with regard to appropriate safety precautions. Information is not intended to be all inclusive and shall be used only as a guide or for reference. Skyline Chemical Corp shall not be held liable for any damage resulting from handling the above product.