

SAFETY DATA SHEET

Commercial product name:

Date of issue:

Page:

MODELBOUW BRANDSTOF

4 November 2008,

version 1

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SPECIALIZED
QUALITY PRODUCTS FOR MODELLING

1. Identification of the substance / preparation and the company.

Product name and code:	MODELBOUW BRANDSTOF
Synonym:	Model Engine Fuel, Glow Fuel.
Material uses:	Engine fuel for model construction vehicles.
Identification company:	Jonker B.V. Heliumstraat 9 NL - 6422 PK Heerlen THE NETHERLANDS Telephone: 31 (0) 45 5667010 Telefax: 31 (0) 45 5667016 E – mail: info@tornado-products.com URL: www.tornado-products.com
Emergency telephone number:	(24 hour), 31(0) 30 2748888, only for the doctor. Vergiftiging informatie centrum (Poisons Information Centre) Utrecht, The Netherlands.

2. Hazard identification.

The preparation is classified according to Directive 1999/45/EC or Directive 67/548/EEC and its amendments.

Highly flammable. Flameproof equipment necessary in the area where this chemical is being used. Avoid all ignition sources. May form explosive mixtures with air. Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. Toxic by inhalation, in contact with skin and if swallowed.

Prevent all contact. Pregnant women are advised no to work with this product. Possible risk of impaired fertility.

3. Composition / information on ingredients.

Ingredient	% weight	danger	CAS#	EG#	REACH#
Methanol	> 50	F; R11 T; R23/24/25-39/23/24/25	67-56-1	200-659-6	-
Nitromethane	10 - 30	R5 R10 - Xn;R22	75-52-5	200-876-6	-

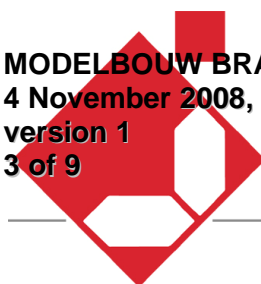
Full text of each relevant R phrase can be found in heading 16.

4. First – aid measures.

Eye contact:	Remove possible contact lenses. Contamination of the eyes must be treated by thorough irrigation with water for 15 minutes, with the eyelids held open. A doctor (or eye specialist) should be consulted immediately.
Skin contact:	Remove contaminated clothing promptly. Wash thoroughly with plenty of soap and water.
Swallowing:	Provided the patient is conscious, wash out mouth with water. DO NOT induce patient to vomit. If less than 15 minutes from a hospital, transport patient immediately to hospital/medical centre. If medical assistance is not immediately available, carefully induce vomiting, protecting against aspiration of material into the lungs, by placing patient head lower than knees. Use fingers, Ipecac Syrup (APF) or similar emetic. Continue to seek medical assistance. The person should be placed and kept in the recovery position if unconscious.
If aerosol or vapour is inhaled in high concentrations:	Remove victim from exposure - avoid becoming a casualty. If breathing laboured and patient cyanotic (blue), ensure airways are clear and have qualified person give oxygen through a face mask. If breathing has stopped apply artificial respiration at once. In the event of cardiac arrest, apply external cardiac massage. For all but the most minor symptoms arrange for <u>patient to be seen by a doctor as soon as possible</u> - either on site or at the nearest hospital.
Further medical treatment:	Watch for toxic effects which may be delayed, including chemical pneumonia. Contact Poisons Information Centre for antidote treatment with ethyl alcohol. Central nervous system depression, and acidosis from methanol metabolites, including formaldehyde, liver function and optic nerve, and other effects should be treated symptomatically.

5. Fire – fighting measures.

Extinguishing media suitable:	Carbon dioxide. Dry chemical. Foam. Large quantities of water.
Extinguishing media which must not be used for safety reasons:	Water jet and powder (dry chemical extinguishers).
Special exposure hazards arriving from substance or preparation itself, combustion products, resulting gases:	Highly flammable liquid. If involved in a fire, it may emit noxious and toxic fumes. In case of fire and/or explosion do not breathe fumes. Combustion products may include: carbon monoxide, nitrogen oxides and carbon dioxide. Vapors may travel a considerable distance to a source of ignition and flashback. Take a safe distance during extinguishing.
Protection of fire-fighters:	Fire - men have to wear self - contained breathing apparatus. Use qualified personnel who are well aware of the dangers of this product. After use clean the equipment thoroughly (shower, clean clothing thoroughly and check suitability).
Additional information:	Heating can cause expansion or decomposition leading to violent rupture of containers. Keep containers cool with water spray. Product or residue can ignite explosively when exposed to fire.



6. Accidental release measures.

Personal precautions:	People dealing with major spillages should wear personal protective clothing (filter mask for organic gases and vapors). Do not approach without full protective clothing. Shut off all possible sources of ignition. Remove any naked lights and strong heat sources. Evacuate unprotected personnel from danger area. Move them upwind. Send message to notify emergency services. For large spills, or tank ruptures, consider initial evacuation distance of 200 meters in all directions. If available use water spray to disperse vapor. Seek contact with a specialist.
Environmental precautions:	Do not discharge into drains or sewers. Isolate leaking containers and stop leak if safe to do so. If significant quantities are being released in the environment, inform the authorities according to the local rules.
Clean up methods:	Spills should be neutralized with alkaline material (soda ash, lime), further contained by, and covered with large quantities of sand, earth or any other non-combustible absorbent material which is then brushed in vigorously to assist absorption. The mixture can then be collected into drums and removed for disposal. Wash area from residues with soap and large quantities of water and rinse down. Contaminated water should be retained, not being allowed to flow into ground or surface water.

7. Handling and storage.

Handling:	STRICT HYGIENE! Prevent exposure by following strict hygiene procedures. Avoid contact with eyes, skin and clothing. Ensure good ventilation/exhaustion at the workplace. Handle carton and cans with care. Avoid dropping. Keep ignition sources away - Do not smoke. Nearby equipment must be earthed. Protect against electrostatic charges. Never use welding or cutting torch on or near (empty) product containers.
Storage:	Keep container tightly closed when not in use. Keep away from sources of heat and direct sunlight. Separated from amines, alkalis and acids – dry alkali, amine salts, inorganic acids, aldehydes, alkylene oxides, halogens, acid anhydrides, monomers and polymerisable esters. Prevent product temperatures above 30 °C and below -15 °C. Keep separated from foodstuff.
	Suitable storage material: Original packaging.
	Storage material to avoid: -
	Storage temperature: Recommended storage temperature 5 - 30 °C.
Specific use(s):	Classification storage (NL): Classified according to PGS15. Engine fuel for model construction vehicles. Prevent contact during filling.

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8. Exposure controls / personal protection.

Limits of exposure.

Name component

Occupational exposure limits and source.

Methanol

TWA (8 hrs) 266 mg/m³ (200 ppm)

Short term (15 minutes) 333 mg/m³ (250 ppm)

UK EH40 Workplace exposure limits also EU limits

Nitromethane

TWA (8 hrs) 254 mg/m³ (100 ppm)

Short term (15 minutes) 381 mg/m³ (150 ppm)

UK EH40 Workplace exposure limits

Personal protective equipment:

Do not eat or drink or smoke whilst working with the product.
Practice strict personal hygiene.

Respiratory protection:

Where the air concentration approaches the exposure standard the following respiratory protection is recommended: Short elevated exposure - organic filter respirator (EN 371 filter type AX/P3). If exposures greater than ten times the TWA - use air line respirators. Prolonged elevated exposure - air line respirator.

Skin and body:



Wear suitable protective clothing (preferable heavy cotton or disposable coverall with a PVC splash apron). Hands and all body parts that have come into contact with the substance should be thoroughly washed in breaks and on termination of operations. Remove contaminated clothing immediately. Keep working clothes separate.

Hands:



Always wash hands and face before eating, drinking, toilet and work breaks. Protective gloves should be worn when handling the product. For prolonged or repeated handling, use gloves: neoprene.

Eyes:



Close-fitting safety glasses (EN 166) or full face protection if splashing may occur.

9. Physical and chemical properties.

General information.

Appearance:

Liquid.

Colour:

Orange.

Odour:

Like alcohol.

Important health, safety and environmental information.

pH:

-

Boiling point:

> 60 °C.

Flash point:

10 - 23 °C.

Melting point:

- 95 °C.

Self-ignition temperature:

> 400 °C.

Explosive properties:

Explosive vapour-air mixtures may be formed between 4,4 and 38,5 (V) % at 50 °C.

Vapour pressure:

128 mbar at 20 °C.

Relative density:

ca. 0,88 at 20 °C (water = 1).

Solubility in water:

Partly soluble in water.

Viscosity:

1 - 2 mPa.s at 20 °C.

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10. Stability and reactivity.

Stability:	Stable at normal use.
Conditions to avoid:	Heat, sparks, and open flames.
Materials to avoid:	Strong oxidizing agents, aluminum, zinc, or metals that displace hydrogen, rubber, and rubber based coatings, chromic anhydride, lead perchlorate, perchloric acid, amines, strong acids, alkali's, metal oxides, hydrocarbons, other materials, lead copper, and their alloys. Contains nitromethane which slowly corrodes steel and copper when wet.
Hazardous decomposition products:	No hazardous decomposition products when stored and handled correctly. Burning may produce carbon monoxide, carbon dioxide, nitrogen oxides which can be toxic by inhalation.

11. Toxicological information.

Acute toxicity from the components:

Product information:	Methanol.
LD ₅₀ (oral, rat):	5.628 mg / kg.
LD ₅₀ (dermal, rabbit):	15.800 mg / kg.
LC ₅₀ (inhalation, rat):	85 mg / l (4 hours).
Product information:	Nitromethane.
LD ₅₀ (oral, rat):	1.210 mg / kg.
LD ₅₀ (dermal, rabbit):	> 2.000 mg / kg.
LC ₀ (inhalation, rat):	> 12,75 mg / l (1 hour).

This health hazard assessment is based on information of the components.

Effects on the eyes:	May cause watering of the eyes, stinging or blurred vision, and sensitivity to light. May cause irritation and corneal damage.
Effects on the skin:	Toxic by skin contact. Contact with skin will result in defatting and moderate irritation. May cause irritation, redness, and pain. Can be absorbed through the skin in harmful amounts.
Effect on the respiratory organs:	Toxic by inhalation. The vapour is irritating to the mucous membranes and respiratory tract. Inhalation of vapour can cause headache, nausea, central nervous system effects, and visual impairment, possibly blindness. Continued exposure can result in health effects as per ingestion.
Ingestion:	Toxic if swallowed. Ingestion can result in nausea, vomiting, severe abdominal pain, back pain, central nervous system effects including optic nerve damage (hyperemia etc.), convulsions, blindness, loss of consciousness and ultimately proceed to coma and death.
Chronic Exposure:	Prolonged, chronic exposure from skin contact, inhalation and swallowing of methanol can result in dermatitis, systemic effects to the liver, heart and possibly kidneys, permanent blindness and central nervous system effects.
Other:	This material contains nitromethane which is classified in the Netherlands as possible risk of impaired fertility (class 3) and methanol as fertility class 2; May cause harm to the unborn child.

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12. Ecological information.

Eco toxicity from the components:

Product information:	Methanol.
LC ₅₀ (fish, lepomis macrochirus):	15.400 mg / l (96 hrs.).
EC ₁₀ (bacteria, pseudomonas putida):	6.600 mg / l (16 hrs.).
EC ₅₀ (algae, chlorella pyrenoidosa):	24 mg / l.
EC ₅₀ (waterflea, daphnia magna):	> 10.000 mg / l (24 hrs.).
Product information:	Nitromethane.
LC ₅₀ (fish, branchydanio rerio):	ca. 460 mg / l (48 hrs.).
EC ₅₀ (algae, scenedesmus subspicatus):	ca. 36 mg / l (72 hours).
EC ₅₀ (waterflea, daphnia magna):	ca. 450 mg / l (24 hrs.).

Ecotoxicity:	When released into the soil, this material may leach into groundwater.
Mobility:	The product is partly soluble in water.
Persistence / degradability:	Part of the product will evaporate, part is biodegradable.
Bioaccumulation:	This material is not expected to significantly bioaccumulate.
Other harmful effects:	May cause harmful effects in the aquatic environment.
WGK:	1 (Wassergefährdungsklasse or water pollution class, German Water Resources Act., limited water pollutant self classification).

13. Disposal considerations.

Product waste:	Incinerate in a hazardous waste incinerator suitable for the disposal of noxious chemical waste in accordance with the stipulations of the relevant regulations. Waste generation should be avoided or minimised where ever possible. If this is not possible, destruction must take place in an approved facility which is equipped to absorb and neutralise acid gasses and other toxic processing products. Waste, even small quantities, should never be poured down drains, sewers or water surfaces.
Waste disposal number (Eural):	13 07 03*. OIL WASTES AND WASTES OF LIQUID FUELS, wastes of liquid fuels; other fuels (including mixtures). Classified as hazardous waste.
Empty containers:	The empty packing is chemical waste. Empty containers must be handled with care due to product residue.
Special dangers of the disposal of the preparation:	The material is toxic and flammable. By handling prevent all contact and keep ignition sources away. Read first safety data sheet.

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14. Transport information.

Classification as ARD material for road transport.

UN number: 1992.

Proper shipping name: UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S.
(mixture contains methanol and nitromethane), 3 (6.1), II.

ADR class: 3 + 6.1.

Classification code: FT1

Packaging: II.



ADR label:

Classification as ICAO/IATA material for air transport.

UN number: 1992.

Proper shipping name: UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S.
(mixture contains methanol and nitromethane), Class 3 (6.1), II.

Packaging instruction (1 litre): Y305 (passenger aeroplane).

Packaging instruction (1 litre): 305 (passenger aeroplane).

Packaging instruction (60 litre): 307 (cargo aircraft).

Class: 3 + 6.1.

ICAO/IATA label: Liquid, flammable and toxic.

Classification as IMDG material for sea transport.

UN number: 1992.

Name on transport document: UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S.
(mixture contains methanol and nitromethane), Class 3 (6.1), II
(10-23 °C). 9.

Maximum quantity: 1 L.

EmS: F-E / S-D.

Marine pollutant: Y.

Packing and stowage: Category B. Stow "Separated from" quarters.

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15. Regulatory information.

EG regulations.



Hazard symbol:

EU labelling classification:

R – (risk) phrases:

S – (safety) phrases:

T	Toxic.
F	Highly flammable.
R11	Highly flammable.
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
R39/23/24/25	Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
S1/2	Keep out of the reach of children.
S7	Keep container tightly closed.
S16	Keep away from sources of ignition - No smoking.
S36/37	Wear suitable protective clothing and gloves.
S41	In case of fire and/or explosion do not breathe fumes.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (German legislation)

Additional EU warning:

1 (Wassergefährdungsklasse or water pollution class).
Contains methanol (index number 603-001-00-X) and nitromethane (index number 609-036-00-7).

Special provision:

- Preparation must be accompanied by precise and easily understandable instructions for use including, where appropriate, instructions for the destruction of the empty package (this Safety Data Sheet can be used as so);
- Specifies the requirements for a tactile warning of danger on packagings which contain certain dangerous substances and preparations (i.g. EN ISO 11683);
- Child-resistant packaging - Requirements and testing procedures for reclosable packages (EN ISO 8317).

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16. Other information.

List of relevant R - phrases referred to under headings 2 and 3:

R5 - Heating may cause an explosion.

R10 - Flammable.

R11 - Highly flammable.

R22 - Harmful if swallowed.

R23/24/25 - Toxic by inhalation, in contact with skin and if swallowed.

R39/23/24/25 - Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

History:

Date of DPF printing:

9 November 2008.

Date of previous issue:

No previous validation.

Version:

1.

Information source:

- IUCLID dataset material ID: 67-56-1, date 19.02.2000;

- IUCLID dataset material ID: 75-52-5, date 19.02.2000.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the product's properties. In all cases, it is the responsibility of the user to determine the applicability of such information and recommendations and the suitability of any products for its own particular purpose.

Safety data sheet according regulation (EC) No 1907/2006 of the European parliament and of the council from 18 December 2006 concerning the registration, evaluation, authorisation and restriction of chemicals (REACH).

MODELBOUW BRANDSTOF is a trademark of Jonker B.V..

Annex.

From the raw materials in this recipe, at the moment of drafting this safety data sheet, no chemical safety reports according to regulation (EC) no. 1907/2006 has been registered.